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DEPARTMENT OF
HEALTH AND HUMAN SERVICES



NEVADA DIVISION of PUBLIC
and BEHAVIORAL HEALTH



Cody Phinney,
MPH
Administrator

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Chief Medical
Officer

MEMORANDUM

DATE: May xx, 2024,
TO: John Pennell, Chair State Board of Health
FROM: Cody Phinney, Administrator
Division of Public and Behavioral Health
RE: Variance Case #763 Desert Radiology

SUBJECT: CASE #763 DESERT RADIOLOGY (DR), VARIANCE TO NEVADA ADMINISTRATIVE CODE (NAC) 459.556, ADMINISTRATIVE CONTROLS: MINIMUM EXPOSURE TECHNIQUES; USE OF PORTABLE OR MOBILE EQUIPMENT, SECTIONS 556(L)(C) AND (D)

Staff Review

For the reasons stated below and with the conditions specified, Division of Public and Behavioral Health (DPBH) staff recommend the State Board of Health approve Case #763, Desert Radiology, request for a variance to NAC 459.556(l)(c) and (d).

NEVADA ADMINISTRATIVE CODE (NAC) 459.556 states, in relevant part:

1. Procedures and auxiliary equipment designed to minimize exposure to the patient and personnel commensurate with obtaining the needed diagnostic information must be utilized, including the following:

[...]

(c) Except as otherwise provided in paragraph (d), portable or mobile equipment may be used only for:

(1) Examinations where it is impractical to transfer the patient to a stationary radiographic installation; and

(2) Its designed purpose, as specified by the manufacturer; and

(d) Portable or mobile equipment may be used in lieu of stationary equipment for a period of not more than 90 days while the facility is awaiting the delivery of new stationary equipment or the repair of registered stationary equipment if the following conditions are satisfied:

(1) The portable or mobile equipment has been registered and the appropriate fee has been paid in accordance with NAC 459.154 and 459.161; and

(2) The registrant has requested, in writing, and been granted authorization from the Division to use the portable or mobile equipment in lieu of stationary equipment. Such a request must include, without limitation:

- (I) The date of installation of the portable or mobile equipment; and
- (II) The expected duration of the use of the portable or mobile equipment.

2. The Division shall grant an extension of an authorization to use portable or mobile equipment in lieu of stationary equipment if the registrant:

- (a) Requests the extension at least 10 days before the expiration of the original authorization; and
- (b) Demonstrates that the extension is justified by submitting documentation indicating that the delivery or repair of the stationary equipment was delayed.

Summary of Variance Request:

Variance applicant Desert Radiology ("Applicant") submitted a request for variance from the requirements of NAC 459.556(l)(c) and (d) on April 25, 2024. The Applicant is requesting approval to use a portable x-ray machine in lieu of a stationary x-ray machine to provide imaging services for professional sporting events such as the Women's National Basketball Association (WNBA) held at the Michelob ULTRA Arena at Mandalay Bay Hotel and Casino in Las Vegas, Nevada.

Intent of Regulation:

The intent of NAC 459.556(l)(c) and (d) are to protect the health and safety of radiologic technologist and patients by limiting the use of portable or mobile x-ray machines to situations where patients cannot be transferred to a stationary X-ray machine. The reason for limiting the use of portable or mobile x-ray machines includes:

- Portable and mobile x-ray machines are intended for bedside use when a patient cannot be transported to the designated imaging room with a permanently installed imaging system. Examples include intensive care, critical care, emergency, and surgical patients.
- Portable and mobile x-ray machines produce poorer quality images as compared to stationary machines due to several factors such as: the x-ray tube is less stable, inconsistent measurement of the distance and angle between the x-ray tube and the x-ray film, and limited imaging settings. These factors may lead to blurred or poor-quality images, which will have to be retaken. Repeat imaging increases the overall radiation exposure to patients.
- Portable and mobile x-ray machines do not protect technologists from radiation as well as properly installed stationary machines.

Degree of risk to public health or safety:

The health risk is increased radiation exposure to radiological technologists, patients, and non-radiation workers such as support staff and or members of the public.

Background Information:

The Applicant has a contract to provide x-ray imaging services for WNBA events at the Michelob ULTRA Arena located at the Mandalay Bay Hotel and Casino in Las Vegas. The Applicant does not own the arena and is not able to remodel the facility so that a stationary x-ray machine can be installed. It is common practice for doctors and other medically trained staff to evaluate a player's injury at professional sporting events. Some reasons either real or perceived for assessing injuries at the arena instead of sending the player to the hospital include:

- What seems like a minor injury could in fact be a more serious injury and allowing the player to continue would result in further damage to the player.
- Sending a player to the hospital will likely change the outcome of the game.
- Players may not report or downplay an injury to keep playing, which could result in further injury to the player.
- People may suspect a player of faking an injury or suspect a player was unnecessarily removed from game in order to alter the outcome of the game or for some personal reason.

X-ray imaging is an important tool for assessing injuries and the use of portable x-ray systems at these events are not uncommon in other states.

The Applicant has made the following commitments to reduce health risk:

To protect radiological technologist:

- Technologists will not routinely hold or restrain patients when taking x-rays,
- Technologists have been provided additional training specific to the use of mobile x-ray machines and methods to control the area where x-rays are taken, in order to reduce exposures to ancillary persons and members of the public at the facility.
- The following equipment will be provided:
 - Lead aprons with thyroid collars for technologists,
 - Shielding for patients,
 - Patient table for performing x-rays, and
 - Positioning foams to stabilize patients and minimize movement during x-ray exams.

To reduce exposure to ancillary persons and other non-radiation workers:

- The area where x-rays are taken will be controlled and access limited to only persons necessary for the examination.

To ensure adequate management oversight of these activities:

- Radiation safety personnel will perform oversight of the entire process to include observations of work being performed at least annually and when a new x-ray technologist works independently.

To ensure radiation exposure to patients are maintained as low as reasonably achievable the Applicant will:

- Ensure a medical doctor is on site to prescribe x-rays and to evaluate if an x-ray should be taken using a portable or mobile x-ray machine or if the player needs to be sent off site to a stationary x-ray machine.
- Track all repeat images and review the data to ensure repeat images are kept at an acceptable level and implement corrective actions if needed.

RCP considers the determination of the types of examinations that should be performed using a portable or mobile x-ray machine to be a medical decision that should be made by the physician who prescribes the x-ray in consultation with the Applicant.

The Applicant has agreed to implement the above commitments. {See Attachment A}.

Approval of the variance with the above commitments will minimize the detriment to public health and safety to the extent practical.

Exceptional and undue hardship:

Strict application of 459.556(1)(c) and (d), would require the Applicant to send players to an imaging facility that has a stationary x-ray machine. Sending a player to another facility would likely remove them from the game, which would affect both the game and the player. Players not wanting to be removed from a game may be reluctant to reveal or even hide an injury to keep playing, which could result in further injury to the player. With all of the pressures and competition among professional teams, it is in the best interest of the players, teams, fans, owners, and supporting organizations for injured players to be assessed at the arena. It can help prevent further injury to players, ensure games are conducted in a fair, transparent manner, and help maintain the integrity and reputation of teams, owners, players, and the sporting league overall. X-ray imaging services are an important part of the medical assessment process.

The circumstances associated with this variance are unique. The Applicant does not own and cannot remodel the arena to install a stationary x-ray machine. Moving the games to another arena is also not within the control of the Applicant. The number of x-rays taken is extremely low, for example in 2023 there were four x-ray exams completed during the entire season.

Compliance with the regulation in this case is unduly burdensome given the Applicant has provided adequate protection for technologists, committed to taking actions necessary to maintain patient and ancillary persons radiation exposures to levels that are as slow as reasonably achievable. As stated above there are several adverse consequences associated with a strict application of the regulation which would create a hardship for the players, teams, and supporting organizations.

Approval of this variance is not expected to affect other persons subject to the regulations. The program would support a variance for professional sporting events from other registrants with the same conditions and commitments.

Impairment to the purpose of the regulation:

Approval of the variance could result in increased radiation exposure to radiological technologists and patients. However, implementation of the commitments in Attachment A, will reduce radiation exposures to both radiological technologists and patients to acceptable levels that are reasonably achievable.

Staff Recommendation

DPBH staff recommend the State Board of Health approve Variance Case #XXX Desert Radiology request for a variance to NAC 459.556(l)(c) and (d) for a period of 5 years and with the condition that the Applicant continues to implement the commitments in attachment A.

Public Comments:

Notice of the hearing is scheduled to be posted on the Division of Public & Behavioral Health website at <http://dphh.nv.gov/Boards/BOH/Meetings/Meetings/> and at the 4150 Technology Way Office in Carson City, NV89706 by Date by 9:00 am. The Division of Public & Behavioral Health is not aware of any objections to this variance by any local authorities, and no public comments have been received to date.

Presenter:

John Follette, Manager
Radiation Control Program Division of Public and Behavioral Health
Bureau Health Protection and Preparedness

Attachments:

A. Applicants Commitments

DRAFT

BEFORE THE STATE BOARD OF HEALTH

IN THE MATTER OF

DESERT RADIOLOGY

VARIANCE REQUEST; CASE # 763

The Nevada State Board of Health ("Board"), having considered the application of Desert Radiology for a variance and all other related documents submitted in support of the application in the above referenced matter, makes the following Findings of Fact, Conclusion of Law and Decision to APPROVE Variance Request # 763.

FINDINGS OF FACT

1. The Division of Public and Behavioral Health received a request from Desert Radiology, on (Date of request) for a variance from Nevada ADMINISTRATIVE Code (NAC) 459.556.1 (c) and (d) which states, in relevant part:

1. Procedures and auxiliary equipment designed to minimize exposure to the patient and personnel commensurate with obtaining the needed diagnostic information must be utilized, including the following:

[. . .]

- (c) Except as otherwise provided in paragraph (d), portable or mobile equipment may be used only for:

- (1) Examinations where it is impractical to transfer the patient to a stationary radiographic installation; and

- (2) Its designed purpose, as specified by the manufacturer; and

- (d) Portable or mobile equipment may be used in lieu of stationary equipment for a period of not more than 90 days while the facility is awaiting the delivery of new stationary equipment or the repair of registered stationary equipment if the following conditions are satisfied:

- (1) The portable or mobile equipment has been registered and the appropriate fee has been paid in accordance with NAC 459.154 and 459.161; and

- (2) The registrant has requested, in writing, and been granted authorization from the Division to use the portable or mobile equipment in lieu of stationary equipment. Such a request must include, without limitation:

- (i) The date of installation of the portable or mobile equipment; and

- (ii) The expected duration of the use of the portable or mobile equipment.

2. The Board considered Variance Request # 763 at the June 7, 2024, meeting of the Board of Health. A representative of the Division of Public and Behavioral Health was present to present staff recommendations and answer Board questions.

3. Variance Request #763 requests a variance from the requirements of NAC 459.566(1), to allow the applicant to use a portable x-ray machine in lieu of a stationary x-ray machine to provide imaging services for the professional sporting events held at Michelob ULTRA Arena in the Mandalay Bay Hotel and Casino. The variance as requested would include additional measures to ensure safety, which include:

(a) To protect the radiological technologist:

(1) Technologists will not routinely hold or restrain patients when taking x-rays;

(2) Technologists have been provided additional training specific to the use of mobile x-ray machines and methods to control the area where x-rays are taken, in order to reduce exposures to ancillary persons and members of the public at the facility; and

(3) The following equipment will be provided:

(i) Lead aprons with thyroid collars for technologists,

(ii) Shielding for patients,

(iii) Patient table for performing x-rays, and

(iv) Positioning foams to stabilize patients and minimize movement during x-ray exams.

(b) To reduce exposure to ancillary persons and other non-radiation workers, the area where x-rays are taken will be controlled and access limited to only persons necessary for the examination.

(c) To ensure adequate management oversight of these activities, radiation safety personnel will perform oversight of the entire process to include observations of work being performed at least

annually and when a new x-ray technologist works independently.

(d) To ensure radiation exposure to patients are maintained as low as reasonably achievable the

Applicant will:

(1) Ensure a medical doctor is on site to prescribe x-rays and to evaluate if an x-ray should be taken using a portable or mobile x-ray machine or if the patient needs to be sent off site to a stationary x-ray machine; and,

(2) Track all repeat images and review the data to ensure repeat images are kept at an acceptable level and implement corrective actions if needed.

CONCLUSIONS OF LAW

1. This matter is properly before the Nevada State Board of Health pursuant to Nevada Revised Statutes (NRS) 439.200 and determination of the matter on the merits is properly within the subject matter jurisdiction of the board.
2. NRS 439.200 provides:
The State Board of Health may grant a variance from the requirements of a regulation if it finds that:
 - (a) Strict application of that regulation would result in exceptional and undue hardship to the person requesting the variance; and
 - (b) The variance, if granted would not:
 - (1) Cause substantial detriment to the public welfare; or
 - (2) Impair substantially the purpose of the regulation.
3. The Board finds that strict application of the regulation would result in an exceptional and Undue hardship.
4. The Board finds that granting this variance would not impair the purpose of the regulation or cause a substantial detriment to the public welfare.

ORDER

Based upon the foregoing Findings of Fact and Conclusions of Law, and good cause appearing, therefore, IT IS HEREBY ORDERED, ADJUDGED, AND DECREED that the variance from NAC 459.556(1) (c) and (d) is APPROVED as presented; specifically, Desert Radiology will be allowed to use portable or mobile x-ray equipment in support of professional sporting events for a period of 5 years after the date of this approval provided Desert Radiology complies with the radiation protection commitments submitted in support of this variance.

DATED this 7th day of June 2024

Cody Phinney, MPH, Administrator
Division of Public and Behavioral Health
Department of Health and Human Services