DEPARTMENT OF THE AIR FORCE
OFFICE OF THE CHIEF OF STAFF
WASHINGTON, DC

MEMORANDUM FOR SEE DISTRIBUTION APR 3 2007

FROM: HQ/USAF/SG3D
110 Luke Ave, Room 300
Bolling AFB, DC 20032-7050

SUBJECT: Appropriate Use of Hand-Held X-ray Units for Oral and Maxillofacial Radiography

The USAF Dental Service has purchased a number of Nomad hand-held x-ray units manufactured by Aribex, Inc. for use in dental clinics and in the deployed environment. These devices offer distinct benefits for certain applications but they should not be used as a substitute for fixed, mounted dental x-ray tubes in permanent facilities. The guidelines below will assist in maximizing operator and patient safety as well as ensuring optimum image quality.

1. The FDA 510(k) approval for the Nomad demonstrated substantial equivalence to a *portable* intraoral x-ray system designed for field use, not a fixed, mounted dental x-ray unit. Therefore, patients scheduled for routine radiographs in permanent facilities should be imaged using fixed x-ray systems. Fixed units offer advantages that make them preferable for routine use: higher operating potentials and beam qualities, shorter exposure times, higher operation tempo, rigid mounting, and remote activation.

2. When it is either impractical or impossible to use a fixed x-ray system the next choice is a portable x-ray unit with a rigid base and a remote switch. Advantages of these systems include a stationary focal spot, tube currents typically greater than 5 mA, and reduced operator radiation dose.

3. If the above two options are either impractical or impossible then a Nomad can be considered for use. Appropriate applications include emergency and forensic applications outside the dental clinic, deployments, and humanitarian missions. Within the dental clinic there may also be scenarios where use of the Nomad is indicated. Examples include but are not limited to dental treatment in which the patient or required equipment can not easily or safely be moved to or from another room for the procedure, or doing so would unreasonably lengthen the procedure. The qualified dental practitioner is best able to determine when the Nomad should be used, keeping in mind guidelines 1 and 2.

4. The manufacturer provides appropriate guidance for safe use of the Nomad and this guidance must be studied and followed. Additionally, the operator must stay within the "zone of significant occupancy," the shield must always be used, and only a single operator and the patient should be in the room during the exposure.

5. Security of the Nomad must be assured at all times. This includes guarding against both theft and unauthorized use. Security should be addressed in a local policy on the appropriate use of Nomad considering the scope of practice for the clinic. Staff must be appropriately trained, and procedures strictly enforced.

For additional information on this policy contact LtCol Jay Graver, Director of Dental Operations at DSN 297-0137, jay.graver@pentagon.af.mil; or Major Robert Rodgers, Deputy Chief, Radiation Protection Division, Office of the Surgeon General, at DSN 297-4309, robert.rodgers-02@pentagon.af.mil.

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1. Distribution Lists