DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
2300 E STREET NW
WASHINGTON DC 20372-7300

IN REPLY REFER TO

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Ser M3/5 HCS7/AT-69149

MAY 0 6 2010

MEMORANDUM FOR COMMANDER, NAVY MEDICINE EAST
COMMANDER, NAVY MEDICINE WEST
COMMANDER, NAVY MEDICINE NATIONAL CAPITAL AREA
COMMANDER, NAVY MEDICINE SUPPORT COMMAND

Subj: ACQUISITION AND APPROPRIATE USE OF CONE BEAM VOLUMETRIC IMAGING

1. Cone Beam Volumetric Imaging (CBVI) is a recent technological innovation that offers significantly reduced patient radiation exposure compared to traditional medical computerized tomography scanning while providing enhanced pre-operative imaging for selected procedures in the dental and maxillofacial regions. This capability is anticipated to reduce the incidence of post-operative morbidity. Successful deployment of this technology offers significant enhancement to patient safety for beneficiaries of Navy healthcare.

2. A number of CBVI devices are available within the U.S. Navy. While the benefits of leveraging this technology are indisputable, Navy Medical Treatment Facilities (MTFs) and Dental Treatment Facilities (DTFs) planning device acquisition must take into consideration the necessary Information Technology (IT) and radiation safety infrastructure, and the appropriate use of the images obtained. The requirements listed herein will assist in the efficient acquisition, deployment, and appropriate utilization of CBVI capability.

3. Over 50 commercial devices are currently available of varying sizes, capabilities, limitations, and targeted uses. MTFs and DTFs must determine the potential uses of these devices specific to their facilities. Proposed uses will influence the selection of manufacturer, model, and cost. The Specialty Leader for Oral Radiology is the centralized resource to assist commands in the evaluation and selection of the device appropriate to the facility.

4. Overall design, formal shielding analysis, installation, and maintenance must be coordinated with the local MTF health physicist/radiation health officer, the MTF/DTF facility manager, and with the specific site installation team for the vendor, as negotiated in the purchase order contract. The radiation health officer is the appropriate point of contact concerning the acceptance survey of the CBVI device.

5. All personnel involved in the exposure and transmission of cone beam images and volumes shall be properly trained per the current Navy Medicine Radiation Safety program. The purchase order contract shall include comprehensive and specific training by the vendor. Documentation of training and current ongoing competency shall be maintained in the MTF/DTF personnel training folders.

6. All CBVI studies should be ordered through the current Armed Forces Health Longitudinal Technology Application/Composite Health Care System. At a minimum, the entire volume set of data of all studies shall be interpreted and documented by report by either a fully trained medical diagnostic radiologist or oral and maxillofacial radiologist.

7. Due to the expense of these devices relative to traditional dental imaging modalities, MTFs and DTFs shall prepare a business case analysis which provides numerical information on current and proposed workload, current and proposed costs, and predicted patient safety and risk management expense savings associated with adopting the new technology, as well as plans to address any Digital Imaging and Communications in Medicine (DICOM) compliance, radiation safety, space configuration or IT infrastructure requirements necessary to properly support this technology. Acquisition proposals will be submitted to Naval Medical Logistics Command (NAVMEDLOGCOM) for review by the Navy Diagnostic Imaging and Radiotherapy Board (NAVDIRB), which will make approval/disapproval recommendations to NAVMEDLOGCOM.

8. The following is a summary checklist of specific minimum requirements for use of CBVI devices in Navy MTFs/DTF to be provided to NAVMEDLOGCOM for NAVDIRB review:

a. Data provided by the proposed unit is compatible with a generic DICOM reader (i.e., no private DICOM tags attached to the dataset).

b. Image display of data provided by the proposed unit is suitable for reading by radiologist and ordering practitioner.

c. Data provided by the proposed unit can be work-listed to assure Health Insurance Portability and Accountability Act compliance.

d. Successful validation of the DICOM data provided by the proposed unit by the local medical radiology picture archiving communication system vendor has been accomplished.

e. An approved Platform Information Technology document for the proposed unit has been obtained.

f. Design and installation of the proposed unit have been approved by the local medical physicist/Radiation Safety Officer.

g. Protocol is in place for interpretation and report of the full volume of data by an appropriately trained practitioner.

h. Protocol is in place for a trained individual to perform daily validation of device output using the manufacturer's phantom.

9. Please ensure widest dissemination to your activities and appropriate implementation of this policy. Points of contact are CDR William Carter, Specialty Leader for Diagnostic Radiology, William.Carter@med.navy.mil, (301) 295-0165; and CDR Sean Meehan, Specialty Leader for Oral Medicine, Oral Pharmacology and Oral Radiology, Sean.Meehan@med.navy.mil, (301) 295-4013.

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