County of Los Angeles **Department of Health Services**

VALLEYCARE
OLIVE VIEW-UCLA MEDICAL CENTER/HEALTH CENTERS
MEDICAL ADMINISTRATION
POLICY & PROCEDURE

NUMBER: 1733
VERSION: 2

SUBJECT/TITLE: **EMERGENCY DEPARTMENT BEDSIDE ULTRASOUND (EBUS) POLICY AND PROCEDURE**

POLICY:

PURPOSE: To facilitate the use of EBUS to provide high quality and efficient care for emergency department patients (1) with acute, life-threatening illnesses, (2) in need of invasive procedures to be done with minimal risk, and (3) who are stable but with conditions for which their evaluation can be greatly expedited. To define 'core applications' and 'adjunct applications' of ultrasound in Emergency Medicine.

DEPARTMENTS: **ALL MEDICAL DEPARTMENTS**

DEFINITIONS: **Core Emergency Medicine Ultrasound Applications:**
As defined by ACEP, the 11 core, or primary emergency ultrasound applications are listed in Table 1, "The criteria for inclusion as core are widespread use, significant evidence base, uniqueness in diagnosis or decision-making, or importance in primary emergency diagnosis and resuscitation." (ACEP 2008, p3)

Table 1
Trauma
Intrauterine Pregnancy
AAA
Cardiac
Biliary
Urinary Tract
DVT
Soft-tissue/musculoskeletal
Thoracic
Ocular
Procedural Guidance

Adjunct Emergency Medicine Ultrasound Applications:
"Many other applications may be used by emergency physicians, and their non-inclusion in the core applications should not diminish their importance in practice." These applications will be used only in conjunction with additional

imaging, consultation, laboratory studies, or independent clinical reasoning for medical decision-making; and will not serve as primary decision making guides.

Table 2. Other emergency ultrasound applications (adjunct or emerging).

Advanced Echo
Transesophageal Echo
Bowel (including intussusception, appendicitis, pyloric stenosis, diverticulitis, SBO)
Adnexal Pathology
Testicular
Transcranial Doppler
Contrast Studies

DEM Director of Emergency Ultrasound is the DEM faculty designee with specific training in EBUS responsible for primary oversight of EBUS under the auspices of the department chair.

PROCEDURE:

I. Credentialing

DEM attendings who meet the following didactic, hands-on training and accuracy requirements will be privileged to perform EBUS in the emergency department. (DEM attendings who have completed an ACEP approved fellowship in EBUS at a Joint Commission accredited institution will have these didactic and hands-on training requirements waived.) A listing of the EBUS privileged DEM attendings will be listed on the ValleyCare Olive View-UCLA Medical Center intranet.

(A) Didactic Requirements:
Participation in the 16-hour "Introduction to Emergency Ultrasound" course provided by the DEM Director of Emergency Ultrasound or certificate of completion of 16 hours of CME in emergency ultrasound through an accredited course or an accredited residency training program.

(B) Hands-on Training Requirements:
In accordance with American College of Emergency Physicians guidelines, the following numbers of hands-on exams are required for credentialing. In accordance with current RRC guidelines, a minimum of 40 total US exams will be required. These exams should include a representative number of the core indications by anatomic area, (i.e., abdominal, pelvic and cardiac ultrasounds), as well as the application of US to facilitate miscellaneous procedures, as above. Most EBUS studies used for credentialing are reviewed by the Director of Emergency Ultrasound within 2 weeks for image quality and accuracy and at least 15 of these exams must be directly supervised by a Physician privileged to perform EBUS.

(C) Accuracy and Quality Requirements:

Emergency physician candidates who meet the above didactic and hands-on training requirements must have an accuracy of at least 90% to become privileged in the 11 core EBUS applications. The physician will be privileged for the 11 core applications as a single bundle. The accuracy and quality (see Continuous Quality Improvement below) of the studies will be assessed by the DEM Director of Emergency Ultrasound.

II. Privileges

Once a physician has completed the credentialing process, full privileges for all EBUS indications will be granted as follows:

(A) Current faculty physicians trained and credentialed in EBUS at ValleyCare Olive View-UCLA Medical Center & Health Centers will have further proctoring waived due to being proctored during the credentialing period. All physician privileges, however, will be subject to ongoing continuous quality improvement review (see section V.)

(B) Physicians who meet the credentialing requirements due to training outside of ValleyCare Olive View-UCLA Medical Center & Health Centers must undergo direct proctoring of 5 exams per core indication by anatomic area by a physician with full privileges for EBUS or for Ultrasound in Department of Radiology at ValleyCare Olive View-UCLA Medical Center & Health Centers. Following this period of proctoring, full privileges for EBUS will be granted, subject to ongoing and continuous quality improvement review (see section V.)

III. Housestaff

Senior residents (PGY3 and PGY4) who meet the same didactic, hands-on training and accuracy requirements as above will be considered competent to perform EBUS in the DEM and certified by the DEM Director of Emergency Ultrasound without required supervision. A listing of DEM residents who are certified in EBUS will be listed on the ValleyCare Olive View-UCLA Medical Center intranet. Residents who are not certified in EBUS are required to perform the ultrasound under the direct supervision or with review and/or consultation by an attending physician.

For current UCLA residents who achieve competency in EBUS during training and subsequently join the PSA at ValleyCare Olive View-UCLA Medical Center & Health Centers, no further credentialing will be required.

IV. Patient Management Using EBUS

In accordance with existing guidelines, EBUS done for training prior to

privileging must be conducted with patient's verbal consent, and may not be used for patients management unless the EBUS in performed or while physically supervised by a physician privileged in EBUS.
EBUS must always be used for patient management n concert with clinical and laboratory evaluation, and appropriate specialty consultation. In some circumstances, e.g., acute life-threatening conditions and invasive procedures, formal imaging outside the emergency department and delayed interpretation by a Department of Radiology physician would expose the patient to excess risk. However, in other circumstances, particularly among stable patients, if EBUS studies are indeterminate, technically limited, or suggestive of unexpected pathology, or if EBUS findings suggest that further management on the basis of these findings could entail undue risks, then optimal patient management should be ensured by subsequent formal imaging and interpretation by the Department of Radiology, and appropriate clinical follow-up as dictated by the responsible DEM attending physician. In addition, patients should be informed of the results of their EBUS evaluation, and will also be informed that an EBUS study is limited in scope and not equivalent to a comprehensive ultrasound study they might receive in the Department of Radiology. This information should be documented on the medical record (see below for clarification) and on their disposition forms if their continued management by their continuing care physicians.

(A) Patient Education
In order to ensure that patients are adequately informed of the nature of their EBUS evaluation, a description of the limited nature of EBUS studies will be documented on the DEM Disposition form, a copy of which is given to the patient.

(B) Communication of Care to Subsequent Providers
In order to ensure adequate communication to subsequent provider, EBUS exam results will be documented on the DEM medical record in the designated location. All study results in which the EBUS was performed by a non-privileged for non-certified physicians will be marked as "preliminary." Study results in which the EBUS was performed by an EBUS-privileged or certified physician may be marked as "final" if the physician will use the result for patient care decision-making. However, the EBUS privileged or certified physician may indicate the result as "preliminary" if the patient requires further imaging.

V. CQI

To ensure ongoing education, training, and quality, a strict process for quality assurance will be followed:

(A) A digital copy of all ultrasound studies will be archived in a

generally accessible database located within the Emergency Department.

(B) A majority of exams performed as part of proctoring, ongoing credentialing of staff, and research will be reviewed by the DEM Director of Emergency Ultrasound. A portion of all other EBUS exams will be reviewed by the DEM Director of Emergency Ultrasound for continuous quality improvement and to assure continued competence of providers. A minority of these studies will be reviewed by the DEM Director of Emergency Ultrasound in real time.

1. Use of proper settings and probe orientation
2. Proper identification of anatomical structures and key findings
3. Use of proper depth, focal zones and gain
4. Optimal visualization of near and far fields
5. Optimal visualization of leading and receding edges
6. Adequacy for clear interpretation
7. Proper interpretation

(C) Reviewed studies will be returned to the emergency physician for feedback. The candidate will then acknowledge that he/she has reviewed the quality assurance comments and understands them. Once acknowledged, they will then be officially logged in the emergency physician's file for credentialing purposes

(D) If repeated deficiencies are found in an emergency physician's studies (e.g., accuracy rate consistently less than 90%), his/her privileges for ultrasound will be temporarily suspended until remediation with the DEM Director of Emergency Ultrasound can be completed.

References: ACEP Ultrasound Policy Statement 2001, ACEP Revised Ultrasound Policy Statement 2008,	
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