STANDARDIZED PROCEDURE
AGITATED SALINE (BUBBLE) STUDY

These procedures are intended to describe procedures performed by Nurse Practitioners and/or Certified Nurse Midwives (depending on the clinical privileges granted to the individual practitioner) at UC San Diego Health.

I. Policy:

The nurse practitioner is authorized to initiate, perform, alter or discontinue using of agitated saline during echocardiography procedures for UCSDMC patients. The nurse practitioner is able to function with remote supervision within UCSDMC Cardiac Non-Invasive Lab or any setting affiliated with UCSDMC Cardiology Service for which competencies have been validated.

II. Protocol:

Definition: Agitated saline is a technique used to generate micro-bubbles. When injected intravenously, these micro-bubbles enable detections of small intra-cardiac, arterial-pulmonary shunts which may not be detectable otherwise. It may also be used to delineation of cardiovascular structures. This test will be done according to the policy and procedures of the Cardiac Non-Invasive Lab.

Data Base: May include but not limited to:

> ***Subjective*** - Relevant history of past or present illness, surgical history, medication history, social history, family history, allergies, relevant review of systems, and relevant diagnostic procedures.
>
> ***Objective*** -Echo images and previous/relevant cardiac diagnostic tests.

Diagnosis: Assessment will be dependant upon data derived from subjective and objective data base. If diagnosis is not clear, a list of differential diagnosis will be provided. Diagnosis or diagnoses will be developed based upon but not limited

> ***Subjective*** - Patient symptoms.
>
> ***Objective*** - echocardiographic findings.

Plan:

I. Evaluate patient during pre-procedure screening for contraindications to agitated saline injection.
II. Educate the patient about the procedure.
III. Monitor patient, vital signs and echocardiographic findings during injection and washout phase.
IV. A preliminary impression will be documented on the preliminary report form for echocardiography.
V. Describe preliminary fmdings to the patient.

VI. Report abnormal findings to a physician or referring provider.
VII. Initiate follow-up evaluation for the patient when indicated.

Record Keeping: Each patient contact will be recorded on a UCSDMC approved form. Preliminary impressions will be documented on the echo worksheet. Further documentation for emergency department or admitted patients may be done on the approved UCSDMC interdisciplinary report form.

III. Requirements for the Nurse Practitioner

All general policies for the experience, training, education, initial evaluation, and ongoing evaluation are in effect for this standardized procedure.

IV. Guidelines for the Nurse Practitioner

A. Agitated saline "bubble" echo patients may include, but are not limited to:

- UCSDMC new patients' referrals
- UCSDMC established patient referrals
- Outside referrals.

B. Agitated saline "bubble" echocardiography patients may include patients from ambulatory and inpatient settings.

C. Cardiology nurse practitioner may supervise agitated saline "bubble" echocardiography.

V. RESPONSIBILITY

Please contact the Advanced Practice Council if you need help. The administrative assistant for the Chief Nursing Officer can direct you. Call; 619-543-3438.

VI. HISTORY OF PROCEDURE

Revised by the Committee of Interdisciplinary Practices: 2/26/2014, 9/28/2016
Reviewed by the Medical Staff Credentials Committee: 3/5/2014, 10/6/2016
Approved by the Medical Staff Executive Committee: 3/20/2014, 10/7/2016