

**OLIVE VIEW-UCLA MEDICAL CENTER
RESPIRATORY CARE SERVICES - ADULT
POLICY & PROCEDURE**

**NUMBER: 840
VERSION: 1**

SUBJECT/TITLE: PCP SPUTUM INDUCTION

POLICY:

1. Pulmonary Consult Service will be notified of all patients who have requests for PCP induction. PCS approval will be necessary for patient who does not meet the criteria. PCP induced sputum will be performed by licensed Respiratory Care Practitioner trained in this specialized procedure. All patients should meet most of the following criteria:
 - a) Risk factors for HIV+ or impaired immunocompetence
 - b) Widened A-a gradient >25 mmHg difference
 - c) Diffuse bilateral pulmonary infiltrates
 - d) Elevated LDH >500
 - e) Decreased CD4 count <200 cells/mm³
 - f) Note to physicians attached
2. The procedure is lengthy and results are patient effort-dependent, therefore, to optimize obtaining a good sample the following should be observed:
 - a) Patient should be well hydrated, with IV fluids if necessary
 - b) Patient made NPO after midnight
 - c) Patient must be awake, alert, cooperative and requiring less than 6 L/min of supplemental oxygen

CONTRAINDICATIONS:

1. Bloody or purulent secretions
2. Patients requiring FI02 greater than 50% to maintain Sa02 greater than 90%
3. Respiratory rate over 35-40
4. Altered mental status

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5. Patient requiring restraints

6. Active bronchospasms

CAUTIONS:

1. Decrease in arterial oxygen saturation

2. Bronchospasm that develops during the procedure

3. Nausea and vomiting

PURPOSE: A noninvasive, diagnostic technique for Pneumocystic Carinii Pneumonia (PCP) sputum induction.

DEPARTMENTS: RESPIRATORY CARE SERVICES

EQUIPMENT:

1. Four-50cc vial of sodium bicarbonate (NaHco3)
2. Four cups for NaHco3
3. One toothbrush
4. One emesis basin
5. 1 vial of hypertonic saline 10%
6. Aero Eclipse HHN
7. Three sputum containers
8. Lab slips or bar codes
9. Pulse Oximeter
10. N95 Mask or Powered Air Purifying Respirator

PROCEDURE:

1. Check physician orders
2. Don required Personal Protective Equipment (PPE)
3. Place equipment at bedside

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4. Explain procedure to patient
5. Patient will brush teeth, gum, inside of cheeks, tongue, roof and floor of mouth
6. Have patient gargle and rinse vigorously with NaHCO₃. The first three cups (150cc) are used to brush, gargle and rinse.
7. The fourth cup is used for gargling and rinsing only.
8. Place 3cc of 10% saline in Eclipse HHN, refill if necessary
9. Instruct patient to place mouthpiece in mouth, making a tight seal; instruct patient to breathe deeply through the mouth only
10. Encourage patient to deep breath and cough (if possible to stand and cough)
11. Obtain the three sputum samples with at least 10cc in each container
12. First two containers are used to rule out AFB, Legionella, fungus, bacteriology and gram stain
13. Last container use for silver stain for the diagnosis of PCP
14. Bar Code for PCP must be properly filled out. Notify lab tech that a specimen has been left so pathologist is aware
15. Specimen must be taken to the lab and processed between one and two hours following collection

References:	
Approved by: Arnold Panganiban (Chief of Respiratory Therapy), Nikhil Barot ()	Date: 05/17/2019
Review Date: 05/17/2019	Revision Date:
Next Review Date: 05/17/2022	
Distribution: Respiratory Care	
Original Date: Not Set	