## TRIAGE NURSE CHEST X-RAY ORDERING
### CEDARS SINAI MEDICAL CENTER

**Publication Year:** 2004

### Summary:
Specially trained nurses assess whether a patient has a certain pulmonary condition and order chest x-rays during triage.

### Hospital:
Cedars-Sinai Medical Center

**Location:**
8700 Beverly Blvd.
Los Angeles, CA 90048

### Category:
- C: Clinician Initial Evaluation & Throughput

### Key Words:
- Patient Volume
- Wait Times

### Hospital Metrics:
*(Taken from FY2005 AHA Annual Survey)*
- Annual ED Volume: 73,139
- Hospital Beds: 855
- Ownership: Not-for-profit
- Trauma Level: 1
- Teaching Status: Yes

### Tools Provided:
- **CSMC Community Acquired Pneumonia Standardized Procedure Protocol**
  This tool is a six-page document explaining the standard procedures used by the trained triage nurse to order a chest x-ray for patients exhibiting pulmonary conditions consistent with community-acquired pneumonia, and is used by hospital staff and potential triage nurses to explain the procedures to be used when taking this position.

### Clinical Areas Affected:
- Emergency Department
- Radiology

### Staff Involved:
- Nurses
- Physicians
Innovation
An emergency department (ED) protocol was developed to allow specially trained nurses to assess whether a patient has a pulmonary condition consistent with community-acquired pneumonia. If so, the triage nurse electronically orders chest x-rays and indicates that the patient is at triage. This allows a patient to receive an x-ray before seeing their treating physician in the ED. This strategy effectively uses time for a diagnostic test that used to be spent waiting, reducing the overall amount of time that a patient must spend in the ED.

As with many hospitals, Cedars-Sinai Medical Center is continually striving to reduce the time patients in the ED spend waiting. One way they have done this is by making better use of some patients’ time in the waiting room.

ED Unit Manager Flora Haus, RN, MSN, CEN, reports that in the past, ED patients who had been triaged and were stable received no diagnostic or therapeutic care in the waiting room. So, if the patient needed a chest x-ray, they might wait two or three hours to see a physician before the test was ordered. It was noted that establishing a protocol that allowed a triage nurse to order a chest x-ray could offer significant time savings to the patient and allow them to receive needed antibiotics sooner.

Results
The main measure of success has been the decrease in the time between a patient’s arrival to receiving his/her antibiotics. A couple of patients have had their antibiotics administered in as short as an hour and a half after arrival.

Incidentally, the national benchmark for a patient to get antibiotics following a chest x-ray was recently reduced from eight hours to four hours. Cedars-Sinai had previously been at four hours but recognized the benefits of further reducing the waiting time. The literature indicates that the sooner a patient receives antibiotics, the better it is for morality, morbidity and hospital LOS. This protocol is therefore able to improve the patient’s outcome while also reducing the patient’s time spent in the ED and hospital.

Innovation Implementation
The triage nurse chest x-ray ordering protocol was developed to allow specially trained nurses to assess whether a patient has a pulmonary condition consistent with community-acquired pneumonia. If so, the triage nurse electronically orders chest x-rays and indicates that the patient is at triage. The radiology department then comes and retrieves the patient, takes the needed chest x-rays, and returns the patient to the waiting room. Approximately half an hour later, a radiologist reads the x-rays. If the radiologist sees that the patient does have pneumonia, they will call the physician, who will order antibiotics at that point. If the x-ray does not reveal such a condition, the x-ray is nonetheless available at the time the patient sees the physician.

To implement this (See CSMC Community Acquired Pneumonia Standardized Procedure Protocol), the department’s educator met with the senior physicians and drafted how it might work. They also drafted a policy and procedure, a quiz for the nurses, and a return demonstration skills checklist (i.e., a six-item evaluation for management to confirm the nurse can assess the need and place the order for the x-rays correctly).

Next, individual training occurred. Training emphasized that the test ordering should not be casual and should be done only on well-determined need. Additionally, the protocol was only taught to nurses with the greatest amount of experience and expertise.

According to Ms. Haus, it was necessary to have radiology’s buy-in to this new process, and in particular the need for the radiologist to phone the emergency physician as soon as a positive result was found. It was the hope of the ED that radiology would feel the clock ticking as the ED did. Radiology understood and bought in. The important thing was that the ED physicians and radiologists were involved in the process along with the participating ED nurses.

The department is hoping to expand this process to other clinical procedures.
Advice and Lessons Learned
Ms. Haus recommends not making this protocol a blanket protocol for all nurses to follow. Rather, the nursing manager should use his/her judgment and determine which nurses have the clinical expertise and competence to assess the patients.

Also, the department needs to take time to prepare the staff. Simply saying that a new policy starts today does not work. However, it is possible to quickly initiate a test period. Short-term trials of potential best practices are frequently conducted at Cedars-Sinai, and there is a philosophy that the failures should be considered learning experiences toward a better understanding of what works.

Tools to Download
CSMC Community Acquired Pneumonia Standardized Procedure Protocol
This tool is a six-page document explaining the standard procedures used by the trained triage nurse to order a chest x-ray for patients exhibiting pulmonary conditions consistent with community-acquired pneumonia, and is used by hospital staff and potential triage nurses to explain the procedures to be used when taking this position.
STANDARDIZED PROCEDURE

I. STANDARD OF PRACTICE

Nursing will ensure the establishment and maintenance of competency, proficiency and currentness of Nursing personnel in accordance with roles and responsibilities as outlined in their job descriptions.

II. POLICY

A Registered Nurse may order a chest x-ray on eligible patients who present to the Emergency Department with signs or symptoms consistent with pneumonia prior to them being seen by an emergency department physician. Registered Nurse competency for the standardized procedure will be established by:

1. Demonstrating the process with and completing a competency checklist under the supervision of a senior nurse who has already demonstrated competency.
2. Having the initial and subsequent Skill’s Checklist and Competency Record placed in the employee’s personnel file.
3. Having a current and valid California R.N. license.

III. PURPOSE

A. The purpose of this standardized procedure is to ensure that community acquired pneumonia patients receive treatment including, but not limited to antibiotic therapy within four hours of arrival to the hospital.

B. To define the nursing responsibilities associated with patients who present to the emergency department with signs or symptoms of pneumonia.

IV. PROCEDURE

A. When an adult patient arrives to the emergency department with symptoms of productive cough, chest pain, shortness of breath, fever, 02 sat <95%, wheezes / rhonchi / rales, and decreased breath sounds or any combination of symptoms that are highly suspicious of pneumonia, the Registered Nurse will:

1. Complete a triage assessment including acuity and full set of vital signs including pulse oximetry on room air.
2. After a medical record number is assigned to the patient the Registered Nurse will Order a chest x-ray in EmStat:
   a. Document in the EmStat chart in the "Orders " box under x-rays, chest x-ray 2 views. Check ordering physician “Per Protocol”
   b. Pick appropriate clinical indications from the list such as “SOB”, “fever”, “pain chest”, “cough”.
3. When the patient is a woman of childbearing age, last menstrual period will be obtained and the x-ray tech will shield the abdomen per departmental policy.
4. At the completion of the x-ray the patient will be placed either in an available and appropriate room or space or retruned to the triage lobby; dependent upon patient acuity. The emergency department physician will be notified by the _____ that a pneumonia protocol patient has a completed chest x-ray.
5. There will be no delays in a physician examination and diagnostic or therapeutic procedures by the protocol when a physician is immediately available to see the patient.

B. A list of R.N.’s approved to perform this procedure is to be kept on file in the Emergency Department and in the office of the Chief Nursing Officer (CNO).

V. KEY WORDS
   • Community Acquired Pneumonia

VI. STANDARD OF CARE
   • None

VII. COMPETENCY
   • Pneumonia chest x-ray standardized procedure quiz and checklist

VIII. POLICY ORIGINATOR(S) AND APPROVAL(S)
   A. Policy Originator
      • Phil Booth, R.N., CNIV, Educator
      • James Loftus/Joel Geiderman
<table>
<thead>
<tr>
<th>Subject:</th>
<th>Community Acquired Pneumonia Triage Protocol Standardized Procedure</th>
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</thead>
</table>

**DRAFT**

**B.** Policy Approvals

- Linda Burnes Bolton, Dr.P.H., RN, FAAN  
  Co-Chairperson, Joint Practice Committee  
  Vice President and Chief Nursing Officer
1. A 56 year old male arrives at triage with a chief complaint of productive cough for 3 days and fever. Due to the short duration of symptoms, this patient would not be appropriate for the protocol and would therefore not have a chest x-ray ordered by the triage nurse.

   a. True    b. False

2. Clinical indications do not need to be documented in Emstat when a chest x-ray is ordered.

   a. True    b. False

3. If an adult has a fever greater than 101 f, the triage nurse can only implement the fever protocol, and not the pneumonia chest x-ray protocol.

   a. True    b. False

4. Patients who have signs/symptoms consistent with pneumonia must wait at triage until they have a medical record number and get a chest x-ray even when there are no other patients in the department and the physicians are not busy.

   a. True    b. False

5. A 48 year old female with shortness of breath and right sided chest and back pain with a cough and an O2 sat of 96% would be an appropriate patient for a chest x-ray by the triage nurse under the protocol.

   a. True    b. False
6. A 26 year old male with a productive cough for 6 weeks, weight loss of 20 lbs over the same period, HIV +, who just arrived from Thailand where he spent the last 2 years in prison should wait at triage until the nurse can get a medical record number and order a chest x-ray per the protocol.

   a. True     b. False

7. Albuterol treatments by the triage nurse is a part of the pneumonia protocol.

   a. True     b. False

8. The main goal for implementing the pneumonia protocol is to ensure that patients with community acquired pneumonia receive treatment, including but not limited to antibiotics within four hours of arrival to the emergency department.

   a. True     b. False

Skills Checklist
PNEUMONIA CHEST X-RAY PROTOCOL SKILL CHECKLIST

Demonstrator Name _______________________________

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Validator’s initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult has signs/symptoms consistent with pneumonia: productive cough, chest pain, shortness of breath, fever, O2 sat &lt;95%, wheezes/rhonchi/rales, and decreased breath sounds or any combination thereof, complete triage assessment will include vital signs with pulse oximetry.</td>
<td></td>
</tr>
<tr>
<td>After a medical record number is assigned to the patient the Registered Nurse will Order a chest x-ray: Document in the EmStat chart in the “Orders “ box under x-rays, chest x-ray 2 views. Check ordering physician “Per Protocol”</td>
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<td>Pick appropriate clinical indications from the list such as “SOB”, “fever”, “pain chest”, “cough”.</td>
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<tr>
<td>If the patient is a woman of childbearing age, last menstrual period will be obtained and the x-ray tech will shield the abdomen per departmental policy.</td>
<td></td>
</tr>
<tr>
<td>When the x-ray is completed, place the patient in the treatment area in an appropriate room or space as rooms or spaces become available and patient acuity and flow permits.</td>
<td></td>
</tr>
<tr>
<td>Notify the emergency department physician _____ that a pneumonia protocol patient has a completed chest x-ray.</td>
<td></td>
</tr>
</tbody>
</table>

Date of demonstration __________  Validator Name ______________________________

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