

## TeamSTEPPS CUS/SBAR Case Scenario

**Summary / Overview of Hospitalization:** A 64-year-old male with multiple health issues comes to the hospital with difficulty breathing. What should have been a simple 48-hour hospitalization ended up as a complicated 10-day hospital stay due to several lapses in medical care and team communication as well as a significant medication error. The patient's overall satisfaction with his stay was also low due to a lack of timely and effective team communication.

**Past Medical History:** Mr. Stanley Londborg is a 67-year-old male with epilepsy since childhood; hypertension (HTN) x 10 years; and chronic obstructive pulmonary disease (COPD) x 5 years. He has visited the hospital four times within the last year: twice for acute COPD exacerbation; once for HTN urgency due to medication non-compliance, and once for status epilepticus. He had smoked since age 14 but stopped 5 years ago when diagnosed with COPD. No alcohol use. No known drug allergies.

### Home Medications:

albuterol (Proventil®) 2 puffs every 4 hours as needed for shortness of breath (rescue inhaler)  
tiotropium (Spiriva®) 18 mcg inhaler 2 puffs once daily for COPD  
salmeterol (Serevent®) 50mcg/puff inhaler 2 puffs every 12 hours for COPD  
amlodipine 5mg / valsartan 160mg (Exforge®) once daily for HTN  
levetiracetam (Keppra XR®) 500mg once daily for epilepsy,  
started 1 week ago  
lamotrigine (Lamictal®) 250mg every 12 hours for epilepsy x 2 years  
valproic acid (Depakote®) 1g every 12 hours for epilepsy x 5 years

***Pharm vs. Provider:** Triple drug therapy for epilepsy is almost never helpful unless the patient is having multiple types of seizures which he is not. Triple therapy increases ADRs without increasing efficacy. Use verbal Pharmacy / Provider collaboration to discuss and reconcile this issue. Should one of the drugs have been stopped when the levetiracetam was started? Should his neurologist be consulted? Should all 3 drugs be continued?*

**Day 1:** Mr. Londborg presented to the emergency department with wheezing and difficulty breathing. Physical exam revealed acute worsening of COPD. The chest x-ray was negative for pneumonia. The patient was admitted for treatment of acute COPD exacerbation, most likely due to a bacterial respiratory tract infection. Lab work showed normal electrolytes and liver function tests, but he had an elevated SCr and BUN (indicating possible acute kidney impairment). Mr. Londborg's inhalers were temporarily discontinued and replaced with nebulized albuterol 2.5 mg and ipratropium 0.5 mg administered by respiratory therapy (RT) q4h around the clock. All of his other home medications were continued PLUS new orders for oxygen per nasal cannula, prednisone 40mg daily (corticosteroid), clarithromycin (Biaxin XR®) 1000mg every 12 hours for pneumonia, and IV fluids.

***Pharm vs. Provider:** Clarithromycin has metabolism interactions with valproic acid and amlodipine. Use verbal Pharmacy / Provider collaboration to discuss and reconcile this potential drug interaction. What antibiotic would be better to use?*

***Pharm vs. Provider vs. Nurs vs. MLS:** Elevated SCr (serum creatinine) and BUN (blood urea nitrogen) indicate possible renal impairment; however, elevated SCr & BUN can be due to other reasons as well. Other causes for elevated SCr could be discussed. Please use MLS vs. Pharm/Provider/Nurs or Pharm vs. Provider/Nurse to discuss any of the following (see next page):*

- Certain medications, (e.g. cephalosporins, trimethoprim, cimetidine) can falsely elevate SCr. It would be good to make sure he wasn't taking these at home prior to admission.*

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*Adapted from IHI Open School Case Studies*

- Dehydration can elevate both SCr and BUN levels.
- Diet (e.g. high red meat and protein diets) can result in elevated BUN.
- GI bleeding can result in elevated BUN readings.
- SCr may be falsely elevated when the specimen has been affected by hemolysis, bilirubin, or lipemia. (One of the most common methods is the Jaffe reaction, which involves picric acid and a chromagen which reacts with the creatinine in the sample producing a red-colored product measured by the instrument and proportional to the amount of creatinine present in the patient specimen.)

**Day 2:** Mr. Londborg showed signs of respiratory improvement but was still short of breath. The provider ordered physical therapy twice daily to keep the patient ambulating. The nurse noted that while eating the patient often cleared his throat and coughed. The nurse also noticed a white coating on his tongue that would not wipe clean when she/he was helping Mr. Londborg with his morning hygiene. She/he also noted a large laceration on the left lateral boarder of his tongue with multiple chipped molars. The nurse also noticed a white coating on his tongue that would not wipe clean when she/he was helping Mr. Londborg with his morning hygiene. She/he also noted a large laceration on the left lateral boarder of his tongue with multiple chipped molars.

***NSG / SLP / DH vs. Provider:** The nurse/SLP/DH is concerned about possible aspiration and informs the Provider/Nurse about those observations in order to obtain an order for a swallow study speech language pathologist (SLP) as well as a consultation from dental hygiene.*

No overt signs of aspiration were noted during the swallow study but the SLP did note that the continued shortness of air was causing difficulty eating and suggested careful monitoring of positioning during eating and potential diet modifications (e.g. smaller bites, swallow after each bite). He also complained about the inability to chew on the posterior mandibular molar region and that he has lost 25 lbs in the past year. This was explained to Mr. Londborg and it was recorded in his medical record, but the information was not communicated back verbally to the healthcare team. The SLP also noted that Mr. Londborg was having significant difficulty hearing. When questioned, Mr. Londborg complained that he had lost one of his hearing aids and was having ringing in his ears which was new, therefore, the SLP also requested in the patient chart that the medical provider order an audiology evaluation.

***SLP / Aud / DH vs. Nurse / Provider:** Results from several assessments and request for further referrals need to be communicated between disciplines and back to the Nurse and/or Medical Provider both verbally and documented in the chart. Use these examples to verbally communicate important information back and forth between these disciplines:*

- *Nursing staff is extremely busy requesting close observation during meals might present a burden to nursing time. However, it is very important to patient safety to protect against aspiration.*
- *The patient is complaining about the inability to chew on the posterior mandibular molar region and he has lost 25 lbs in the past year.*
- *Patient is complaining of tinnitus (ringing in the ears) making sleep difficult.*

**Day 3:** Mr. Londborg was still having difficulty eating with coughing and choking. Today, his breathing seemed even more difficult. Nursing notes green sputum production with a foul odor. Mr. Londborg wasn't able to fully participate during physical therapy sessions due to his shortness of air. During PT, his O2 sats would drop and he would become tachycardic. Therefore, therapy had to be canceled today. The SLP had asked the audiologist about the hearing evaluation results but the audiologist was unaware of the situation because the provider had not ordered an audiology evaluation.

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**Several lapses in communication led to these issues. Use verbal collaboration to discuss this important communication lapse and make a plan to prevent it from happening in the future.**

**PT vs. Provider / Nurse / Pharm:** *The healthcare team was not checking PT progress notes on a regular basis and assumed if there were problems, PT would let them know. Likewise, PT assumed that the team was checking the PT progress notes and was aware of these issues.*

**Pharm / PT / Provider:** *Pharmacy normally evaluates all patients for risk of deep vein thrombosis (DVT clot) and recommends enoxaparin (Lovenox) prophylaxis if not ordered; however, when pharmacy saw that PT was ordered, they assumed he was ambulating enough that he would not need DVT prophylaxis so no recommendation was made.*

**SLP / Nurse:** *Mr. Londborg either did not understand, did not remember, or could not hear the SLPs instructions regarding safer eating. Nursing was unaware of the swallow evaluation results/instructions so the patient was not being observed during meals. Worsening respiratory status and green, foul smelling sputum may indicate an aspiration pneumonia developing.*

**Audiology / SLP / Provider / Nurse:** *The SLP was alarmed that no one had acted upon the audiology eval. The audiologist will need to contact the provider or nurse directly to explain the situation and request the evaluation order. Because the audiologist and SLP work within the same office, the audiologist is surprised that the SLP hadn't mentioned the issue of hearing aids and new tinnitus verbally. This may need to be discussed.*

**Day 4:** During a physical therapy session, Mr. Londborg complained that his left leg was “really hurting.” Upon examination, the PT noticed that his left calf was swollen, red, and tender to touch. The PT made note of this in the medical record but could not find a nurse or provider to communicate these findings. He also presented with large swelling on the left submandibular area of his jaw. He also presented with large swelling on the left submandibular area of his jaw.

**Normally a potentially significant or “dangerous” finding like this would be communicated back to the nurse and/or medical provider verbally as well as documented in the chart. Use verbal collaboration to discuss this important communication lapse and make a plan to prevent it from happening in the future**

**PT vs. Provider / Nurse / Pharm:** *PT can take this opportunity to express concerns about possible DVT and lack of ambulation during therapy.*

**Any vs. DH:** *DH needs to be alerted to the swelling found in the jaw.*

**Pharm vs. Provider:** *Pharmacy can make a recommendation for treatment of DVT*

**MLS vs. Provider / Nurse:** *Appropriate lab tests for suspected DVT would have been to order a D-Dimer along with Ultrasound. A D-Dimer is a small protein fragment that stays in the blood after a blood clot is formed and broken down. Normally, D-Dimer levels are relatively low. But when a person has a major clot like a deep vein thrombosis (DVT), you can get high levels. A high D-Dimer level would be associated with an increase of thrombin being generated, which is associated with clot formation.*

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- Day 5:** The patient complained of worsening leg pain to the nurse early in the morning and asked when he was going to get a replacement hearing aid as promised by the SLP several days ago. The nurse was unaware of the hearing aid issue but was more concerned with the leg pain. The nurse looked through Mr. Londborg's medical record and noticed the PT documentation and then notified the medical provider who ordered diagnostic ultrasound to lower extremities, which revealed a blood clot in the left calf. Mr. Londborg's admission medication orders did not include the standard DVT prophylaxis.
- Day 6:** DVT treatment with enoxaparin (Lovenox) should be started at 1mg/kg q12h. However, the order cannot be written by the provider and cannot be filled by pharmacy because the patient's height and weight are not in the chart. Also, the patient's renal function cannot be assessed without this information which will affect the correct dose. [Provider / Pharmacy / Nursing]
- Day 7:** Audiology was finally consulted to assist Mr. Londborg with his missing hearing aid and to evaluate the new onset of ringing in the ears.  
Audiology vs. Provider / Pharm: *The patient's antibiotic is known to cause acute tinnitus. It is a rare side effect, but the audiologist has seen it happen before, especially in older adults who already have hearing impairment. The audiologist may wish to discuss this with the provider directly, or may wish to discuss it with the pharmacist since most likely an antibiotic change will be in order and the pharmacist may be able to assist the provider with alternate suggestions. The actual incidence of tinnitus from macrolides is unknown but several case reports are available in the literature.*
- Day 8:** At 10 PM an environmental services staff member found Mr. Londborg on the floor of his room and immediately alerted the nurse. The nurse noted seizure activity and paged the medical provider. IV lorazepam (Ativan) was ordered and administered to halt the seizure activity. Because no one witnessed his fall, once stabilized, a CT of the head was ordered which was negative for signs of bleeding. The provider reviewed the chart and medication history to determine possible causes of the seizure. The provider discovered that the seizure medication, levetiracetam, had not been given since admission. The medication was restarted.  
Pharm / Nurse / Provider: A notation in the medication administration record (MAR) indicated that the medicine was not available in the automatic medication dispensing system on the floor and that doses would be manually sent to the floor from pharmacy daily. The notation (due to poor handwriting) was interpreted as a "hold" order by nursing who then notified pharmacy that the drug was on hold. When pharmacy was notified by nursing that the order was on hold, no one checked with the provider or the medication orders to verify that the medication was indeed on hold. Several lapses in communication led to this issue. Use verbal collaboration to discuss this important communication lapse and make a plan to prevent it from happening in the future.
- Day 9:** After his mental status improved, he complained of pain in his left shoulder and elbow, so the nurse asked PT to evaluate this during his regularly scheduled PT session. The PT evaluation revealed that Mr. Londborg was unable to move his left arm without severe pain; however, X- rays revealed no evidence of fracture. Pain medications were ordered. The submandibular swelling has not subsided.
- Day 10:** Mr. Londborg was discharged to home with no further complications.

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