The effect of a structured discharge education plan on pneumonia readmission rates.

Leisa Kelly, MS, APRN,CEN
Clinical Nurse Specialist

Objective

- To explore the use of an educational tool to reduce the 30-day all cause readmissions of pneumonia by 10% (December 2009)

Background

- All cause readmissions occur nationwide about 20% of the time within 30 days of discharge.
- The all cause readmissions cost the Centers for Medicare and Medicaid (CMS) $15 billion annually. A recent recommendation from the Payment Advisory Committee (PAC) to congress is that all cause readmissions be denied payment.

Project Team

- In January 2009, a commissioned team was established with a nurse leader of the multidisciplinary pneumonia team to decrease the all cause readmission rate.

Background

- The all-cause (any reason) readmission rate for an adult discharged with pneumonia was 19.67%.
- This recommendation includes for ANY reason for readmission, even if not directly related to the initial hospitalization.

Project Team

- The project team consist of:
  - Divisional Director of the Emergency Department (chair)
  - Divisional Director of the Medicine Division
  - Physician Champion
  - Clinical Nurse Specialist-Medicine
  - Quality Outcomes Analysis
  - Medical Management representative
  - Pharmacist
Ad hoc members

- Ad hoc members included:
  - Respiratory Therapists
  - ED Nurse Supervisor
  - Staff Nurses from the Medicine Division
  - ED Staff Nurses.

Development of the tool

- The development of the tool was to assist the bedside nurse and clinician to:
  1) facilitate patient understanding of the discharge instructions
  2) determine clinical stability for discharge

Educational Tool

The following items were discussed daily with the patient and/or family members:
- Medications
- Activity
- Diet
- Worsening Symptoms
- Follow up
- Home needs
- Avoid
- Are you ready?

Educational Tool

- The tool was reviewed daily to assess knowledge related to each criterion and comprehension utilizing the traffic signal.
- The red light: meant the patient had multiple questions and needed better understanding of the medical needs or condition

Educational Tool

- The yellow light: signified the patient had some understanding, but needed more information about how to care for self at home.
- The green light: meant the patient fully understood and had no questions about self-management at home.

Educational Tool

- Scripting was developed to assist the bedside nurse in educating the patient.
  - For example: Do you have trouble getting new medications that are prescribed by your doctor?
  - Are you able to walk, perform ADL’s independently?
Discharge Criteria

- Clinical Stability Criteria from Halm, et. al. Arch Intern Med 2002; 162:1278-84 was utilized as well
- Discharge criteria included:
  - Mental Status
  - Oral (enteral) intake
  - Temperature
  - Heart Rate
  - Systolic Blood Pressure
  - Pulse Oximetry

Clinical Stability Criteria

- Stable was defined as
  - Mental status-Normal or baseline
  - Oral intake-Tolerating adequately
  - Temperature Less than 100.4°F last 24 hours
  - Heart rate-Less than 100 beats/min last 24 hours
  - Respirations-Less than 24 breaths/min last 24 hours
  - Systolic BP-Greater than 90 mmHg last 24 hours
  - Pulse Oximetry-Greater than 90% prior to discharge or baseline

Clinical Stability Criteria

- Discharge stability is assessed prior to discharge utilizing the research of Halm, et. al. This research found that for discharge, the patient should have no more than a single criteria abnormal.

Clinical Stability Criteria

- Patients with 0, 1 or 2 or more criteria abnormal have a 10.5%, 13.7%, 46.2% readmission rates; therefore patients with none or one criteria abnormal result in essentially the same readmission rate.

Respiratory Therapy

- Respiratory developed an educational tool for MDI technique-with and without a spacer
- Live demonstrations were available for viewing on Channel 21

Pharmacy

- Pharmacy developed a tool of common medications administered to pneumonia patients
- This sheet provided indications, instructions for both nurses and patients
Pilot Study

- Five medical-surgical units were included in the pilot.
- Bedside nurses were educated on the tool
- Notebooks were posted on the units for pneumonia (PN) patients
- LUNG stickers were placed on the patient's chart and nurse station board

Audit

- Auditing of the educational tool was done daily by the Medicine CNS
- Monthly statistics were collected regarding the teaching on Day 1 and Day 2 as well as the clinical stability criteria

Results

- Over a 12 month period pneumonia readmission rate for all causes dropped to 7.8% with a clinical stability of 95%.
- Teaching on Day 1 and Day 2 varied from 66% to 90% respectively.

Future Plans

- Next steps include:
  - Expanding the pilot to all adult pneumonia patients
  - Working with information systems to automate a patient list and a nurse task for patient education.