

# Prevention and Management of Aspiration Pneumonia

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## Introduction/Background/Summary

Residents at the Skilled Nursing Facility have more functional disabilities and underlying medical illnesses and are at increased risk patients have an increased risk for aspirating oropharyngeal secretions and regurgitated gastric contents. For those who are tube-fed, aspiration of gastric contents is of greater concern. While witnessed large-volume aspirations occur occasionally, small-volume clinically silent aspirations are far more common. A laboratory study identified frequent micro aspirations in approximately half of a large population of critically ill, mechanically ventilated patients who were receiving tube feedings. In the same study, risk for pneumonia was about 4 times greater in patients identified as frequent aspirators. Because no bedside tests are currently available to detect micro aspirations, efforts to prevent or minimize aspiration take on added importance (AACN, 2011). In the Residential Services Health Care Associated Pneumonia (HCAP) is the most common hospital acquired infection and is associated with mortality and morbidity. It also is the leading reason for transfer of our residents to acute-care facilities. Recognition is often delayed because, in our population, pneumonia often presents without fever, cough, or dyspnea. The facility has developed a protocol which includes prevention strategies and clinical management of Aspiration Pneumonia in Residential Services and Long Term care facilities. Implementation of the protocol has resulted in all residents being assessed for the Risk for aspiration pneumonia and managed as per the best available scientific guidelines.

## Aim/Objective

To develop an informed clinical practice guideline that focuses on recent recommendations for the recognition of respiratory symptoms and criteria for the designation of probable pneumonia, and provides a guide to hospitalization, antibiotic use, and prevention.

## Methods

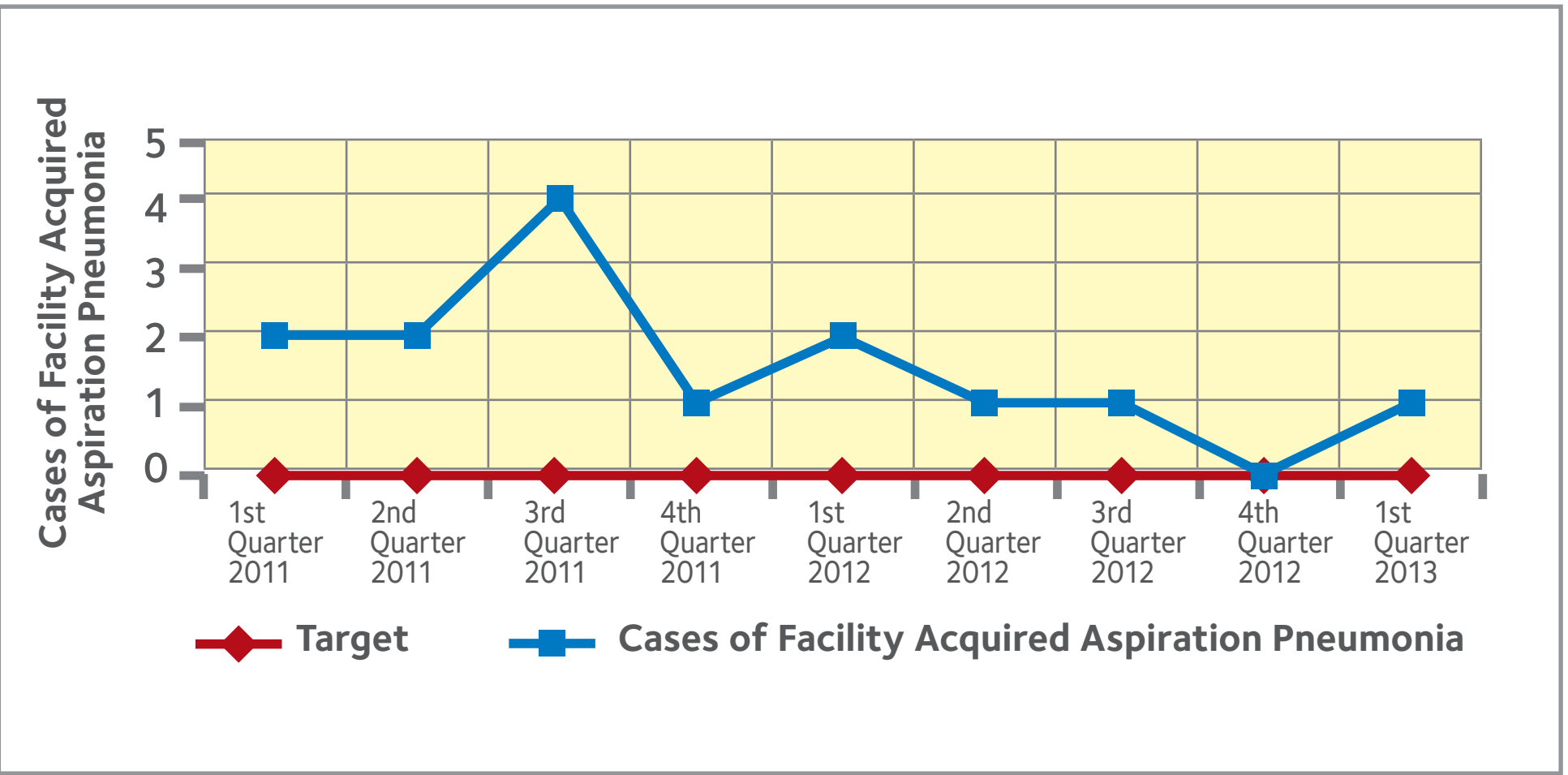
A multidisciplinary team led by the Unit Physicians, Nurses, Infection Control, Therapist and Quality Reviewers was formed. A critique of systematic reviews and existing clinical practice guidelines was conducted and through a process of consensus, the protocol was developed.

This protocol includes:

1. Aspiration Pneumonia prevention strategies for oral and tube feeding residents which is used to assess all residents on admission to Residential Services. The protocol also encompasses the assessment of Oral Hygiene, proper positioning of resident for feeding, correct tube placement, safe feeding and swallowing methods, resident and family education, etc.
2. Nursing Bedside swallow Screen used for all residents on admission who are at a risk of aspiration. All patients at risk must remain NPO until a swallowing screening has been completed. Residents who have difficulties with this bedside swallowing screening are kept NPO and referred for a formal swallowing evaluation by a speech therapist. The tool also prompts staff of warning signs that may be indicative of difficulties and/or abnormalities with swallowing.
3. Aspiration Pneumonia Management protocol consists of a standardized physicians order set. This contains clear guidelines on assessment, investigations, antibiotic therapy and management of residents suspected to have aspiration pneumonia.
4. Aspiration Alert Card placed at the head end of the bed for residents at risk.

## Results/Outcomes

The uptake of these guidelines has also manifested with up to 60% reduction in the cases of aspiration pneumonia from 9 cases in 2011 to 4 cases in 2012 and only one case in the 6 months after implementing the guidelines.



## Discussion/Conclusion

Implementation of a robust clinical practice guideline/protocol ensures residents are managed as per the best available scientific guidelines. It helps standardize practice and reduce inappropriate variation. It provides long term care physicians with a rational basis for referring residents to emergency department and acute care settings.

## Sustainability/Replication potential

The protocol has established efficient use of resources including investigations and medications. The protocol acts as a focus for quality control and continuous quality improvement. The outcomes from this protocol will help us identify shortcomings of existing literature and suggest appropriate future research.

## Lessons learned/Critical success factors

Staff education, multidisciplinary involvement, systematic evaluation of outcomes and dissemination of findings were key in the successful implementation of the protocol. The protocol has ensured residents are managed as per the best available scientific guidelines

## References

1. John G Bartlett, MD, Daniel J Sexton, MD, Anna R Thorner, MD . Aspiration pneumonia in adults 2012 UpToDate . , last updated Oct 5, 2011
2. Donald M Yealy, MD, FACEP , Michael J Fine, MD, MSc, John G Bartlett, MD, Anna R Thorner, MD Community-acquired pneumonia in adults: Risk stratification and the decision to admit 2012 Up To Date, last updated May 4 2011
3. Royal Australian college of General Practitioners, RACGP, 4th edition 2005 Medical care of older persons in residential aged care facilities.
4. Roya Sayadi and Joel Herskowitz. Swallow Safely: How Swallowing Problems Threaten the Elderly and Others Inside–Outside Press – Published: 2010–06–09.
5. Anita B Varkey, MD. Aspiration Pneumonia. <http://emedicine.medscape.com/article/296198-overview> Mar 29, 2011.
6. British Thoracic Society, Community Acquired Pneumonia in Adults Guideline Group Guidelines for the management of community acquired pneumonia in adults: update 2009 thorax.bmj.com, October 2009 Vol 64 Supplement III
7. HMC Community Acquired Pneumonia Protocol Policy No: CRPO 10505, Effective Date 2007 and was reviewed in 2010.
8. Bing Tschai, RN, MSN., Pam Marshall, RN. (2010) Aspiration and Aspiration Pneumonia Prevention at California Pacific Medical Center.

