Fact Sheet for Nurses: Antibiotic Timing and Selection

Did you know that the cost of caring for hospitalized patients with pneumonia is in the billions each year? Pneumonia is the second-leading reason for hospitalization of older Americans. The combined diagnosis of influenza and pneumonia was the seventh leading cause of death in 2001, but was the primary cause of death from infectious disease in the elderly. Efforts to reduce mortality include following guidelines and performance measures that address the quality of care for these patients.

The Centers for Medicare & Medicaid Services (CMS) developed performance measures that address the timing and selection of antibiotics used to treat pneumonia. Guidelines from such groups as the American Thoracic Society (ATS) and the Infectious Disease Society of America (IDSA) provide the framework from which the measures are derived. Many hospitals incorporate standing orders into their standards of care to promote compliance with such guidelines.

As a nurse caring for this population, it is important to understand the reasoning behind these measures. Following is a list of commonly asked questions about pneumonia.

Q: Why are we using specific antibiotics to treat pneumonia before the blood culture results are available? While research has shown that most pneumonia is caused by *Streptococcus pneumoniae,* many patients are infected with other bacteria, including the "atypical" pathogens such as Legionella. Use of certain empiric antibiotics that are effective against a broad range of pathogens and that provide coverage for the "atypical" pathogens is associated with improved survival. Antibiotic coverage should be focused narrowly if blood cultures or other tests identify specific pathogens.

Q: ***Why administer antibiotics within 4 hours?*** Timely administration has been associated with improved outcomes and a reduced length of stay. Among patients who had not received antibiotics prior to arrival at the hospital, initiation of antibiotic therapy within 4 hours of arrival has been associated with a 17% reduction in mortality.

Q: Why does our hospital collect data on CMS measures? It is important to know where quality of care can be improved. Collecting the data allows hospitals to assess their own performance and to be compared to other hospitals. Eventually the public will be able to use the data to choose the best hospital for their care. Medicare is also piloting a program that increases payment to facilities that follow the evidence-based measures.

Q: What is a QIO? Quality Improvement Organizations (QIOs) help acute care hospitals, physician offices, nursing homes and home care agencies identify opportunities for improvement in the care of patients. These QIOs work with facilities to implement programs that will involve staff, administration, and physicians in the improvement process.

Q: Where can I learn more about the National Pneumonia Project? Your local QIO can assist you in obtaining more information. The website www.medqic.com/pneumonia contains information concerning pneumonia and other quality improvement measures designed to provide better care to the community.

References

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