

Turning Tables on Infection

Screening patients helps beat drug-resistant bug

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By Mike Colias

Evanston Northwestern Healthcare's use of new medical technology has beaten back a virulent strain of bacterial infection that has become a growing scourge on hospitals.

Last year, the hospital system was among the first in the nation to begin screening every patient for a recalcitrant infection caused by methicillin-resistant *Staphylococcus aureus*, or MRSA. The drug-resistant bug lives on the skin and inside the nose, often without symptoms, but infections can cause potentially fatal abscesses, blood poisoning or pneumonia.

MRSA infections at the health system's three hospitals — in Evanston, Glenview and Highland Park; dropped nearly 60% in the year since medical staff started screening all patients, to an average of 30 infections annually from 71, says Lance Peterson, director of microbiology and infectious disease research at Evanston Northwestern.

For decades, U.S. hospitals have grappled with bacterial infections, which cause 90,000 deaths a year and tack on \$5 billion in medical costs, according to the U.S. Centers for Disease Control and Prevention (CDC). The MRSA bug now accounts for more than 60% of all infections contracted in hospitals.

FASTER RESULTS

Until recently, it's been nearly impossible to screen every patient. Getting a sample is easy enough; a nurse simply swipes a cotton tip inside a patient's nose and sends the sample to the lab. But results from traditional lab tests take two or three days. By then, a carrier might have infected others.

Evanston Northwestern uses a new, DNA-based test that returns results within an hour. Patients who test positive are isolated and treated. The test, made by New Jersey-based Becton Dickinson

& Co., was approved by federal regulators in early 2005. It costs \$25 per test, vs. less than \$10 for the traditional test, Dr. Peterson says.

Some hospitals screen "high-risk" patients, such as those in intensive care units or ones transferred from nursing homes or other hospitals, but only a handful of hospitals nationally screen all patients.

Many are wary of operational headaches and added costs, says Tobi Karchmer, an assistant professor of infectious diseases and a hospital epidemiologist at Wake Forest University Baptist Medical Center.

"Hospitals can't look at the cost of the test in a vacuum; you have to look at what you save by preventing transmission," Dr. Karchmer says.

REQUIRING TESTS

Evanston Northwestern spends about \$600,000 a year to test all patients. Dr. Peterson says treating one patient for MRSA infection costs an extra \$25,000 on average. By preventing some 40 infections through screenings, he estimates the health system saved \$1 million, for a net savings of \$400,000.

A bill in the Illinois General Assembly earlier this year would have required all hospitals to screen for MRSA, but it stalled after hospitals asked for more flexibility.

Hospitals in some areas haven't seen MRSA infections and shouldn't be required to test all patients, says Pat Merryweather, senior vice-president at the Illinois Hospital Assn. She says hospitals will look to new CDC guidelines released last week, which recommend better controls, such as staff education, but don't call for universal testing.