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Comprehensive approach associated with reduced MRSA in French hospitals

An intensive program of surveillance, precautions, training and feedback in a large multihospital institution appears to be associated with reductions in rates of methicillin-resistant Staphylococcus aureus (MRSA) over a 15-year period, according to a report in the March 22 issue of *Archives of Internal Medicine*, one of the JAMA/Archives journals.

"The rates of MRSA have reached high levels during recent decades in many countries all over the world, although some have succeeded in containing the spread of this multidrug-resistant organism," the authors write as background information in the article. "Controlling MRSA is a challenge for medical institutions in countries with a high MRSA burden. Because MRSA spread in hospitals is driven by multiple factors such as cross-transmission, invasive procedures and intensive antibiotic use, all guidelines for MRSA control include bundled measures such as identification and isolation of MRSA carriers, hand hygiene and antibiotic policy."

The Assistance Publique-Hôpitaux de Paris (AP-HP) administers 38 teaching hospitals in Paris and surrounding suburbs. In the late 1980s, about 40 percent of all clinical strains of Staphylococcus aureus at AP-HP were MRSA. Vincent Jarlier, M.D., Ph.D., of Groupe Hospitalier Pitié-Salpêtrière, Paris, and colleagues report on the results of a program launched at AP-HP in 1993 to curb the MRSA burden. The program was based on guidelines published by national agencies and focused on isolating patients with MRSA in single-bed rooms, promoting hand hygiene and the use of alcohol-based hand rub, active surveillance of high-risk patients, quick notification of MRSA cases and feedback on the results.

Between 1993 and 2007, MRSA burden decreased about 35 percent, expressed either as the proportion of MRSA among all S aureus strains (a decrease from 41 percent to 26.6 percent) or as the incidence of MRSA cases (from 0.86 to 0.56 per 1,000 days in the hospital). The burden decreased more significantly in intensive care units (a 59 percent decline) than in surgical (44 percent) or medical (32 percent) wards.

In addition, the use of alcohol-based hand rub increased steadily from 2 liters to 21 liters per 1,000 hospital days following the campaign.

The results show that "a sustained reduction of MRSA burden can be obtained at the scale of a large hospital institution with high endemic MRSA rates, providing that an intensive program is maintained for a long period," the authors write.

"Although the decline in MRSA at AP-HP is very encouraging and led to generalize our initiative at the national level, the rates remained high in 2007 compared with those in northern Europe," they conclude. "Patients with MRSA infections or colonizations discharged from AP-HP still represent a source of secondary cases in household contacts. We should therefore maintain our efforts, particularly through antibiotic policy that is at present part of French national programs."

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