
Are measures against MRSA transmission effective?

EDITORIAL

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Efforts to combat the spread of methicillin-resistant *Staphylococcus aureus* are essential, but need to be evaluated.

A main task for infection control efforts in Norway is to prevent the spread of multi-resistant bacteria in hospitals and municipal healthcare institutions. For many years, efforts have focused on methicillin-resistant *Staphylococcus aureus* (MRSA), the first of several problematic bacteria that threaten to gain a foothold in our healthcare institutions.

Infections caused by MRSA transmission cause increased morbidity and mortality and incur high costs (1, 2). Such infections represent a major health problem worldwide, even though the prevalence in Western countries is declining. In the Netherlands and the Nordic countries the prevalence of MRSA has remained low, presumably due to active 'search and destroy' strategies that have been documented by numerous studies, especially in the Netherlands (3). In Norway, MRSA bacteria were detected in 1.6 % of all submitted blood cultures and spinal fluids containing *Staphylococcus aureus* in 2017 (4), while the annual number of people registered as MRSA carriers increased from 205 in 2005 to 1 463 in 2016 (5). Nor has MRSA been able to establish itself in Norwegian livestock populations (5).

'An ounce of prevention is worth a pound of cure' was the advice that Benjamin Franklin gave to Philadelphians who were living with the risk of fire in 1734 (6). This advice is valid for many types of preventive work, including Norwegian infection control as of 2018. Infection control efforts are occasionally perceived as an encumbrance to patient treatment and often incur considerable costs. The costs should not hinder implementation of necessary measures, but all those who are engaged in infection control should be aware of their responsibility for spending shared resources and scrupulously weighing each 'ounce of prevention'.

In this edition of the Journal of the Norwegian Medical Association, Bakken Jørgensen and collaborators present a critical inventory, which evaluates the screening of employees around unexpected cases of MRSA in hospital patients over the years 2012–15 (7). More than 10 000 employees in 12 hospitals were screened. Only 19 employees were carriers of an MRSA strain of the same *spa* type as the index patient, while 12 employees were carriers of an unrelated MRSA type. The authors conclude that national guidelines in this area ought to be revised and the criteria for screening narrowed.

Some may react to the word 'inventory' for a high-quality article such as this one (7). The term has been chosen deliberately. This is not research, but nor should it be ascribed to the category of 'quality project', because such reviews of frequently occurring and resource-intensive activities ought to be routinely undertaken in all health enterprises. In this regard, one flaw in the work by Bakken Jørgensen and collaborators is its failure to discuss the economic aspect. If such screening had been proposed as a new measure to current hospital directors, typically in the form of a 'business case' (sic), the outcome would most likely have been a foregone conclusion: detecting MRSA cross-infection in 19 employees entails a cost, very conservatively estimated, of NOK 3.1 million. The estimate assumes a price of no more than EUR 32, equal to approximately NOK 300, per negative set of test cultures, based on figures taken from a thorough Dutch screening study (8).

'You should write your métier', as Per Fugelli exhorted us (9), and we might add: 'and you should measure it.' One weakness of the material, as the authors also point out, is that the data were obtained in various ways or were plainly unavailable. Far too often, infection control personnel have no access to data that could serve as a basis for evaluating their own activities. In addition, increasingly strict regulations for information security and data protection create unnecessary hindrances for infection control personnel who in the performance of their duties need clinical data for purposes related to hospital epidemiology. Infection control efforts suffer under this encumbrance to an extent that is considerably undercommunicated. In light of the political ambitions to place Norway at the forefront in Europe in the area of e-health (10), a request for better use of valuable digital information at the health enterprise level seems reasonable.

Evaluation of employee screening ought to be one of several topics in a required revision of our national MRSA manual, which was last revised in 2009 (11). Other topics might include the actual benefits of MRSA screening upon admission to hospital, disadvantages of patient segregation, challenges

associated with elimination of MRSA in GP surgeries and documentation of implemented checks. In practice, the MRSA manual is regarded as a guideline, whose measures are loyally adhered to in our hospitals. In a time of increasing challenges involving bacteria with extended spectrum betalactamase (ESBL) and outbreaks of vancomycin-resistant enterococci in several Norwegian hospitals, the prioritisation of limited resources must be carefully considered.

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