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Improvement requires good data

COMMENTARY

METTE WALBERG

Email: mette.walberg@vestreviken.no
Asker og Bærum Hospital
Vestre Viken
1309 Rud

In order to improve, one must be able to measure. Prevalence data for hospital infections are imprecise and fraught with uncertainty. South-Eastern Norway Regional Health Authority should concentrate on incidence rates for surgical site infections, which are the type of infections that have the highest impact on mortality, morbidity and costs. Such data are available through the Norwegian Monitoring System for Infections in the Hospital Services (NOIS).

Deficiencies in goal achievement should prompt efforts to improve the situation. However, in order to improve, one must be able to measure. Such simple requirements must be met by all those who establish goals for improvement. It is encouraging to see that from 2011, South-Eastern Norway Regional Health Authority will include hospital infections as one of its five main goals. It is unfortunate, however, that the data basis chosen is unsuitable for producing improvements. In the form they are currently being collected, prevalence data for hospital infections are imprecise and fraught with uncertainty, and they do not follow the patients after discharge. Such data are intended for monitoring the situation internally in the hospital, and not for assessing goal achievement. With regard to surgical site infections, for example, incidence figures are more certain and more freely available. These are the infections that have the highest impact on mortality, morbidity and costs.

Effective infection control

Effective infection control starts with the management acknowledging its responsibilities. Reducing the number of hospital infections should be high on the list of priorities of any hospital management, but in practice, they often lack decisiveness. Efforts to reduce hospital infections in fact require answers to several questions:

- What types of infections and monitoring periods should be selected?
- What type of data should be used – incidence data or prevalence data?

Research indicates that incidence figures should be chosen above prevalence figures when goals for infection control are being established (1). It is therefore deplorable that South-Eastern Norway Regional Health Authority has chosen prevalence figures rather than incidence figures as the data basis for its efforts to improve the situation.

Surgical site infections are the main cause of suffering, death and costs. The Norwegian Monitoring System for Infections in the Hospital Services (NOIS) was therefore established as a nationwide system to monitor selected procedures, such as aortocoronary surgery, Caesarean sections, hip replacement surgery and gradually also including colon surgery (2). Incidence figures for surgical site infections comply with the moral and legal aspects that rest with the hospital for a prolonged period after the surgery, while prevalence figures only include patients during hospitalization. It is also worth noting that the majority of infections caused by surgery occur after discharge. The national campaign for patient safety, *In Safe Hands*, targets *inter alia* such hospital infections and is based on incidence figures (3). It is foreseen to also include sepsis associated with the use of a central vein catheter.

Goals for infection control

For many years, South-Eastern Norway Regional Health Authority has established goals for its efforts in the field of infection control. However, the goals have been imprecise and therefore inapplicable in practice. The goal for 2011, which in contrast to previous years has been made amenable to measurement, states that: «Hospital infections will be reduced to less than three per cent» (4). To fulfil their purpose, however, goals need to be defined and specified far more painstakingly.

It is reasonable to require that declared goals for the health services ought to be based on the so-called SMART criteria: specific, measurable, attainable, realistic and timely (5). The suitability of the goals as a strategic basis for the efforts depends on the extent to which they are based on a professional consensus and precisely formulated. If staff members cannot perceive the goals as understandable, important and as providing added value, the opportunity for improvement is lost.

Experience from Vestre Viken Health Enterprise

South-Eastern Norway Regional Health Authority should follow the approach chosen by Vestre Viken Health Enterprise. Vestre Viken HE, comprising Kongsberg, Ringerike, Drammen and Bærum hospitals, caters to a population of approximately 450,000, employs approximately 6,600 man-years and has a total of 800 somatic patient beds.

To ensure the effectiveness of its infection control, the Infection Control Department was organized as a staff unit subordinate to the Medical Director. The goals for infection control established by Vestre Viken fulfil the SMART criteria, and comply with legal acts and regulations, general goals stipulated by South-Eastern Norway Regional Health Authority and the internal requirements of Vestre Viken HE. The establishment of goals at Vestre Viken is a result of long-term efforts first initiated at Bærum Hospital in 2005, when the Chief Hygiene Officer implemented the management standard for infection control, DS 2450 (6), which is based on ISO 9001 (7).

Deficiencies in goal achievement should prompt efforts to improve the situation. The management of Bærum Hospital provided the Chief Hygiene Officer with the necessary resources and authority, so that professional knowledge and authority could be used to assist the departments in their implementation of improvements. Several successful projects were undertaken in the period from 2005 to 2010. These have entailed, *inter alia*, that the occurrence of infections following Caesarean sections and *Staphylococcus aureus* infections in the maternity ward has been significantly reduced. Similar improvements have been achieved for hip replacement surgery. These efforts have enjoyed the full support of the management, and they have also been surrounded by vivid interest. Many of the results are in the process of being published.

Stated conflicts of interest:

the author is Chief Hygiene Officer at Vestre Viken Health Enterprise.

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