Usefulness of the Finnish system of intensive care data collection

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Poland, unlike many other countries, is still lacking the national system of collection and analysis of data regarding the course and outcomes of intensive care. Therefore, many relevant data on the number of hospitalisations in individual departments, effectiveness of the therapeutic methods used or their funding are unknown. I do address this issue as for many years I have been working in Finland where such a system exists and its usefulness can be seen on a daily basis.

In 1994, the consortium of Finnish ICUs was established, entrusting the Intensium Company (www.intensium.fi) with collecting and processing of data sent from individual units. The data gathered include demographic characteristics of patients, diagnosis, treatment and outcomes at the following times: on discharge from ICU, completion of hospitalization and six months after hospitalisation (which was added most recently). The patient’s general health status is assessed using APACHE II, SAPS II and SOFA, whereas therapeutic activities are evaluated using TISS-28.

The intensive therapy units in Finland have been equipped with computer-based information systems; thanks to that, numerous detailed data from those units can be collected. The major measure of treatment effectiveness is the standardized mortality rate (SMR), which is the quotient of the number of all deaths and SAPS II predicted death rates.

The membership in the consortium is notably beneficial for intensive therapy units. They are regularly provided with reports concerning their activities and treatment outcomes of other units, which enables comparative analyses. Moreover, twice a year, national meetings are organized to discuss the results of therapeutic interventions and draw some conclusions. The benefits attributable to the national system of intensive care data collection have been well illustrated in the study published by Reinikainen and colleagues [1]. Based on the Intensium database, the authors compared the treatment effectiveness of 85547 adult patients admitted to Finnish ICUs in the years 2001–2004 and 2005–2008. Lower mortality rates were found in the period of 2005–2008, although the conditions of patients on admission were more severe.

According to the authors, improved effectiveness of intensive care was attributable to defining the indications for ICU treatment and their rigorous following as well as to the use of extremely aggressive forms of therapy. Furthermore, once the acute stage changes into the chronic one, patients are transferred from intensive therapy units to other departments designated for such purposes. Futile therapy is avoided. Additionally, it was demonstrated that in 2005–2008, the care provided to patients discharged from intensive therapy units was appropriate.

Thanks to the system of collection and analysis of intensive therapy unit data, “weaknesses” of individual units can be revealed and suitable repair activities undertaken. The system facilitates the management of intensive therapy units and rationalises the repair actions.

The majority of Polish intensive therapy units do not differ from the Finnish units in terms of their equipment or education of anaesthetists. Therefore, it is regrettable that such a national system assessing the effectiveness of individual units has not been designed.

References:

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