



## ISICEM18: What you need to know about ICU cost control



*Controlling ICU costs requires good interdisciplinary communication and optimised resource allocation and use. It does not mean that patient outcomes will be compromised.*

Taking on budgeting can be daunting, but there are key points to bear in mind, according to Jukka Takala, professor of Intensive Care Medicine in the University of Bern, Switzerland, Director and Chief Physician of the Department of Intensive Care Medicine, and Chair of the business unit of Intensive Care Medicine, Emergency Medicine and Anaesthesiology and Pain Medicine at Inselspital, the Bern University Hospital in Switzerland. He gave a concise tutorial on the topic at the 38th International Symposium on Intensive Care and Emergency Medicine, held in Brussels last week.

Budgeting should cover short-, mid, and long-term planning as well as continually monitoring actual resource use. Costs are direct and indirect, fixed and variable.

Planned (elective ICU care) and unplanned admissions (emergency ICU care) need to be considered separately. Patient turnover rate, whether for elective or emergency care, is a major determinant of resources needed. Increasing resources to reduce length of stay can reduce the total costs without compromising quality, emphasised Takala. Active decision making also improves patient flow, as delayed decisions may add one more day's stay in the ICU.

The ICU director should plan the resources needed for elective intensive care with reference to the overall hospital strategy and what partner specialities such as neurology, surgery etc. are doing. These stakeholders need to share the responsibility and risks with the ICU. Elective surgery where post-operative patients are admitted to the ICU after surgery must be planned and fit with the resources available.

The resource needs for emergency admissions for a given population are relatively constant unless indications for ICU admission change, or new treatments alter the indications, e.g. for cerebrovascular emergencies. Local culture and religion also play a part. Key issues for leaders to address are how many resources are allocated for patients with little change of meaningful survival and for patients with a low risk of organ dysfunction or need for treatment.

The ICU is a cost centre for the hospital and can deal with indirect costs in three ways:

1. Producer risk: exclusion from the budget of the requesting unit, and budgeting by the producing unit as direct costs

2. Shared risks: the expected volume of requested services belongs to the budget of the requesting and producing units
3. Internal 'market': services are billed internally, as part of the budgets of both the requesting and producing units

Budgeting is the prediction of resource need based on annual statistics and discussion with the main partner specialities or neurosurgery and neurology, cardiac and vascular surgery, cardiology, visceral surgery and medicine. It includes the prediction of [Therapeutic Intervention Scoring System \(TISS\) score](#) based on annual statistics on relevant patient groups, prediction of production costs and agreement on cost/TISS as well as cost allocation to billing departments.

Staff salaries make up most of the ICU's budget (up to 90% of direct costs and half of total costs). Medications and materials are 10% or less of total costs. Therefore cost containment must focus on process control and optimised allocation of personnel. Medication and material costs, as well as the internal costs provide useful practice markers, and may indirectly reflect cumulative effects on total costs.

Internal services such as radiology, laboratory services, administration, housekeeping and maintenance make up about 40% of total costs. Various cost assignment methods exist including using time as a proxy (by hour or day), a weighted procedure method or assigning cost items directly to the patient. Each has an element of cross-subsidisation. Indirect costs can be allocated in different ways:

- Exclusion from the budget of the requesting unit and budgeting by the producing unit as direct costs (producer carries the risk)
- Expected volume of requested services belongs to the budget of the requesting and producing units (shared risks)
- Internal billing of services, as part of the budgets of both the requesting and producing units (internal market)

Cost containment is possible without compromising outcome, noted Takala. Cost control efforts can help to enhance interdisciplinary collaboration and optimised resource allocation and use. Cost containment requires a culture of shared responsibility and mutual trust, and requires transparency. ICU leaders have the challenge of enhancing patient flow without compromising quality of care and patient safety.

## Further reading

Takala J (2004) [Quality and costs of intensive care – a conflict?](#) ICU Management, 4(2).

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