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Lung transplantation – clear priorities, good outcomes

EDITORIAL

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Since changes were made to the criteria for prioritising patients, the waiting time for a lung transplant has been reduced and fewer patients are dying while on the waiting list.

In this edition of the Journal of the Norwegian Medical Association, Leuckfeld et al. report on the outcomes of lung transplants performed in the period 1999–2020 (1). The article is of interest to anyone treating patients with severe, progressive lung disease, but it also targets a broad audience with a general message: prioritisation must be transparent and based on clear, empirical and verifiable criteria.

The world's first lung transplant was performed in 1963 (2). The journey from experimental surgery to a robust healthcare solution required sustained efforts spanning many years to develop and refine surgical techniques, safer and more effective immunosuppressive therapies, optimisation of organ preservation prior to implantation, as well as improvements to intensive care practices. Long-term survival was not achieved until the 1980s (3). Since 1990, Norwegian patients have also benefited from this. As shown by Leuckfeld et al., Oslo University Hospital, Rikshospitalet has excellent results. Median survival of 10.1 years and a five-year survival rate of 67 % compare favourably to

international data. For example, for the period 2010–2017, the International Society for Heart and Lung Transplantation Registry reported a median survival of 6.7 years and a five-year survival rate of 59 % (4).

While technical, immunological and intensive care obstacles have been overcome, the availability of donor organs has consistently limited the access to organ transplantation, necessitating strict prioritisation. After reviewing its criteria in 2009, Rikshospitalet decided to give a higher priority to patients with rapidly progressing diseases. The waiting time for transplantation as well as the mortality rate among those on the waiting list subsequently shrank (1). Most striking was the reduction in waiting list mortality for patients with cystic fibrosis, which dropped from 41 % in the period 1999–2008 to just 2 % after 2009. The authors interpret this to mean that the change in prioritisation has contributed to a reduction in the waiting list mortality for patients with pulmonary fibrosis and cystic fibrosis. However, they also point out that a substantial increase in capacity – the number of transplants almost doubled from the first to the second half of the study period – has been crucial in reducing both waiting times and waiting list mortality in all diagnostic groups.

> ***«Prioritisation must be transparent and based on clear, empirical and verifiable criteria»***

The retrospective comparison of patient groups in two different time periods involves uncertainty in relation to identifying causal relationships and the quantitative significance of the various factors. Nevertheless, the authors convincingly argue that the change in priority has yielded positive and valuable results. The lower mortality from 2009 among those on the waiting list is unlikely to be due to an increased proportion of patients with relatively better health, since there was no change in the time to death for fibrosis patients on the waiting list who did not receive a transplant.

The Norwegian transplant programme tests the core tenets of the modern welfare state: the population's solidarity with strangers (where bereaved families will consent to donation), the mobilisation of substantial collective resources for an evidence-based healthcare system, equitable distribution, and efficient cooperation between all components of the healthcare continuum (local healthcare services, highly specialised hospitals and research institutions). Limited access to donor organs necessitates careful prioritisation to ensure that lung transplantation is primarily offered to those who potentially stand to gain the most years of good health.

Priorities in healthcare services are often set on a flimsy basis (5). Treatment uptake can depend on geographic proximity or other factors that may be conducive to overuse. Method selection may depend more on the clinician's preferences than on objective knowledge, and time on the waiting list may be given more weight than severity and potential benefit. The study from Rikshospitalet inspires confidence in the prioritisation system for lung transplantation in Norway. Distribution is geographically equitable (6) and the prioritisation criteria are clearly defined, openly accessible and based on

scientific evidence and international consensus. The criteria are verifiable, and the analysis presented suggests that they have brought improvement, particularly for patients with a rapidly progressing lung disease.

Priority setting is an important part of clinical leadership. Leuckfeld et al. highlight a general principle: it is not only clinical practices that should be evidence-based but also healthcare leadership.

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