

Heart transplantations: Prospects of success increase with larger case volumes

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In a series of commissions awarded by the Federal Joint Committee (G-BA) to the Institute for Quality and Efficiency in Health Care (IQWiG), the question is whether for certain surgical procedures, a correlation can

be shown between the volume of services provided per hospital and the quality of treatment results. IQWiG's rapid report on heart transplantations is now available.

According to the findings, a positive correlation can be inferred between the volume of services and the quality of treatment results for [heart](#) transplantations in adults: In hospitals with larger case volumes, fewer of the transplanted patients die, both in timely association with the intervention and in respect of total [mortality](#). However, the three observational studies included in the report show only a low informative value of results.

318 heart transplantations in Germany in 2018

Heart transplantation may be medically indicated in the event of severe cardiac failure that, despite the use of all other treatment options, is progressing and endangers the life of the patient concerned or extremely restricts his or her quality of life. After transplantation, lifelong immunosuppression is required to prevent organ loss due to transplant rejection. In the Eurotransplant region, the average survival time after surgery is currently eleven years.

According to the Eurotransplant statistics, a total of 318 heart transplantations were performed in Germany in 2018. The demand was considerably higher, but could not be met due to the shortage of donor organs.

For heart transplantations in adults in Germany, the G-BA has not yet established minimum volume standards for the provision of services in hospitals.

Positive correlation between case volumes and

survival probabilities

In its worldwide literature searches, IQWiG identified three [observational studies](#) containing usable data for investigating the correlation between volume of services and quality of treatment results for heart transplantations. All three studies analyze this correlation exclusively at the hospital level and not at the level of the surgeons involved in the transplantation.

For the outcome category "mortality," data are available for two outcomes: "all-cause mortality" and "intra- and perioperative mortality" (mortality before, during and immediately after surgery). For both outcomes, a reduction in the number of deaths in hospitals with more heart transplants per year can be inferred from the data.

For the outcomes "in-hospital mortality," "need for retransplantation," "health-related quality of life" (including activities of daily living and dependence on the help of others), as well as "length of hospital stay," the studies evaluated did not contain any data. Data were available for the outcome "adverse effects of treatment," but no statistically significant results could be inferred.

For heart transplantations in adults, IQWiG found no meaningful studies examining the effects of specific minimum case volumes introduced into the health care system on the quality of treatment results.

Provided by Institute for Quality and Efficiency in Health Care

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