Benchmarking

Process of comparing one's business processes and performance metrics to industry bests and best practices from other companies.

Multiple nationwide outcome registries are utilized for quality benchmarking between institutions and individual surgeons.

To evaluate whether the nationwide quality of care programs in the United Kingdom and the United States can measure differences in neurosurgical quality.

A prospective observational study comprised 418 consecutive adult patients undergoing elective craniotomy at Helsinki University Hospital between December 7, 2011, and December 31, 2012. We recorded outcome event rates and categorized them according to British Neurosurgical National Audit Programme (NNAP), American National Surgical Quality Improvement Program (NSQIP), and American National Neurosurgery Quality and Outcomes Database (N2QOD) to assess the applicability of these programs for quality benchmarking and estimated sample sizes required for reliable quality comparisons.

The rate of in-hospital major and minor morbidity was 18.7% and 38.0%, respectively, and 30-d mortality rate was 2.4%. The NSQIP criteria identified 96.2% of major but only 38.4% of minor complications. N2QOD performed better, but almost one-fourth (23.2%) of all patients with adverse outcomes, mostly minor, went unnoticed. For NNAP, a sample size of over 4200 patients per surgeon is required to detect a 50.0% increase in mortality rates between surgeons. The sample size required for reliable comparisons between the rates of complications exceeds 600 patients per center per year.

The implemented benchmarking programs in the United Kingdom and United States fail to identify a considerable number of complications in a high-volume center. Healthcare policy makers should be cautious as outcome comparisons between most centers and individual surgeons are questionable if based on the programs [1)]

1)
Reponen E, Tuominen H, Korja M. Quality of British and American Nationwide Quality of Care and Patient Safety Benchmarking Programs: Case Neurosurgery. Neurosurgery. 2019 Oct 1;85(4):500-507. doi: 10.1093/neuros/nyy380. PubMed PMID: 30165390.