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Impact of regionalisation of cardiac surgery in Emilia-Romagna, Italy.

Nobilio L, Fortuna D, Vizioli M, Berti E, Guastaroba P, Taroni F, Grilli R.

Source

Regional Health Care Agency of Emilia-Romagna, Bologna, Italy. Inobilio@regione.emilia-romagna.it

Abstract

STUDY OBJECTIVE:

Assessment of the impact of the regionalisation of cardiac surgery through the organisational form of a hub&spoke model introduced in the year 2000.

DESIGN:

Case mix adjusted before (1998-1999)-after (2000-2002) comparison of: (a) in-hospital and 30 days mortality rates; (b) proportion of patients timely (within one day) referred for surgery from spoke to hub centres; (c) patients' waiting times to surgery.

SETTING:

Emilia-Romagna, an Italian region with four million residents.

PATIENTS:

16,512 patients aged > or =18 years and referred to cardiac surgery over the period 1998-2002.

MAIN RESULTS:

Overall, taking into account differences in case mix across the whole study period, the implementation of the regionalisation policy was associated with a 22% reduction (OR: 0.79, 95%CI: 0.66 to 0.93) in in-hospital mortality rate. The corresponding figure for 30 day mortality was 18% (OR: 0.82: 95%CI: 0.69 to 0.98). The individual centres' volume of cases changed over the study period for all hospitals but two, and the biggest reduction in mortality was seen at the centre with the largest increase in caseload.

CONCLUSIONS:

This study provides additional evidence on the benefit of regionalisation of cardiac surgery interventions. The system allowed each centre to reach the minimum caseload required to assure good quality of care. These findings suggest that policies aimed at increasing cooperation rather than competition among health service providers have a positive impact on quality of care. Timely referrals for surgery increased by 21% (95%CI: 1.12 to 1.31), and mean waiting times were reduced by 7.5 average days (95%CI: -10.33 to -4.71).