

**LAPAROSCOPIC VERSUS OPEN APPENDICECTOMY: POSTCODE LOTTERY IN ENGLAND**

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**Aim of the Study:** To describe current use of laparoscopic appendicectomy (LapApp) in England.

**Methods:** Health Episodes Statistics (HES) are the primary dataset coding operations in NHS England. Surgical Workload Outcomes Audit Database (SWORD) software was used to interrogate for appendicectomy on all children <18 years between April 2011–March 2016. Specialist paediatric surgical units (SPSU) (n = 21) were defined.

**Main Results:** 49,911 emergency appendicectomies (aged 1-17 years) were performed in the 5-year period 2011-16. Of these 24,200 (48.4%) were performed laparoscopically. The proportion varied from 30.8% (North-West) to 65.9% (South-West).

Only 9145 (18.3%) were treated in SPSU of which 6133 (67%) were LapApp. However even here there was two-fold variation in proportion from 41% (Brighton) to 89% (Leicester).

Mean length of stay (LOS) was 3.1 days in the open group vs. 2.9 days in the LapApp group. The “top ten” in LOS (mean > 4 days) were all SPSU. Short stay (< 48 hours) was achieved in 54.2% overall (53.6% LapApp). The national re-admission rate (30 days) was 9.7% overall and 9.1% for LapApp.

15,154 (3929, 25.9% LapApp) children (1-10 years) underwent emergency appendicectomy of these 3857 (25.4%) were treated in SPSU. The mean LOS in this group was 3.4 days overall (3.8 days for LapApp and the 30-day readmission rate was 11.3% overall and 10.8% for LapApp.

**Conclusions:**

- These figures provide a national benchmark of current attitudes to appendicectomy.
- There is a dramatic variation of application of laparoscopic appendicectomy nationally with a two-fold difference between regional extremes.
- This is independent of activity in SPSU (even in younger children) and even here there is much inter-unit variation.
- There is no prima facie evidence for superiority of LapApp over open operation in terms of LOS or re-admission rate. Disease severity or complications was not available in this database.