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Supporting Information

Supplementary methods and results

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Mills JMZ, Luscombe GM, Hugh TJ. Same-day inguinal hernia repair in Australia, 2000–19. *Med J Aust* 2022; doi: 10.5694/mja2.51410.

Supplementary methods

For the period 1 July 2000–30 June 2019, International Classification of Diseases, 10th revision, Australian modification (ICD-10-AM) 3- and 4-character codes were extracted from the Australian Institute of Health and Welfare (AIHW) Principal Diagnosis data cubes.[1] These datasets contain admission records from both public and private hospitals including number of separations and patient days disaggregated by age, sex, year, and same-day or overnight stay. Statistical separations for inguinal hernia (K40) were manually regrouped by laterality: unilateral (K40.30, K40.40, K40.90, K40.31, K40.41, K40.91) and bilateral (K40.00, K40.10, K40.20, K40.01, K40.21) (Table 1). In this study, "principal diagnosis" refers to a post-operative diagnosis and "same-day separation" refers to when a patient is admitted and discharged on the same date.[1]

For international comparisons, New Zealand and the United Kingdom were selected because, like Australia, health spending contributed about 8% of their gross domestic product[2] and hospital separations were publicly reported. ICD K40 data from 2004-05 to 2017-18 were extracted from the New Zealand Ministry of Health[3] and National Health Service Digital Information[4] websites, with data categorised by private/public hospitalisations only available for New Zealand.

Data analysis

Categorical variables are reported as proportions with 95% confidence intervals (CIs). All analyses were performed in Excel 16 (Microsoft) or SPSS 26 (IBM); $P < 0.05$ was deemed statistically significant.

Table 1. Summary of patient separations according to inguinal hernia diagnoses, Australia, 2000-19

Principal diagnosis	Laterality	Separations	Proportion of separations	International Classification of Diseases classification and definition
Inguinal hernia (K40)	Unilateral	707,113	80.8%	K40.30 Unilateral or unspecified inguinal hernia, with obstruction, without gangrene, not specified as recurrent
				K40.40 Unilateral or unspecified inguinal hernia, with gangrene, not specified as recurrent
				K40.90 Unilateral or unspecified inguinal hernia, without obstruction or gangrene, not specified as recurrent
				K40.31 Unilateral or unspecified inguinal hernia, with obstruction, without gangrene, recurrent
				K40.41 Unilateral or unspecified inguinal hernia, with gangrene, recurrent
				K40.91 Unilateral or unspecified inguinal hernia, without obstruction or gangrene, recurrent
	Bilateral	167,998	19.2%	K40.00 Bilateral inguinal hernia, with obstruction, without gangrene, not specified as recurrent
				K40.10 Bilateral inguinal hernia, with gangrene, not specified as recurrent
				K40.20 Bilateral inguinal hernia, without obstruction or gangrene, not specified as recurrent
				K40.01 Bilateral inguinal hernia, with obstruction, without gangrene, recurrent
				K40.21 Bilateral inguinal hernia, without obstruction or gangrene, recurrent

Supplementary results

Table 2. Proportion of same-day cases for patients diagnosed with inguinal hernias, Australia, 2000-19

		Same-day cases	
	Total number	**Number**	**Proportion [95% confidence interval]**
All patients	875 111	202 018	23.1% [23.0–23.2%]
Sex*			
Male	783 623	175 836	22.4% [22.4–22.5%]
Female	91 462	26 161	28.6% [28.3–28.9%]
Age (years)*			
< 15	75 892	52 775	69.5% [69.2–69.9%]
15–44	177 059	46 689	26.4% [26.2–26.6%]
45–74	480 827	88 628	18.4% [18.3–18.5%]
75 or older	141 331	13 926	9.9% [9.7–10.0%]
Hernia type			
Unilateral	707 113	172 291	24.4% [24.3–24.5%]
Bilateral	167 998	29 727	17.7% [17.5–17.9%]

* In the extracted AIHW dataset, sex was coded for 26 patients and age for two patients as “not reported”.

References

1. Australian Institute of Health and Welfare. Principal diagnosis data cubes (Cat. no: WEB 216). Updated 7 Dec 2020. https://www.aihw.gov.au/reports/hospitals/principal-diagnosis-data-cubes (viewed Mar 2021).
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4. National Health Service Digital. Hospital admitted patient care activity. Updated 17 Sep 2020. https://digital.nhs.uk/data-and-information/publications/statistical/hospital-admitted-patient-care-activity (viewed Mar 2021).