

# 6. Principal procedures for admitted patients

## Introduction

The *National Health Data Dictionary* defines the principal procedure as the most significant procedure that was performed for treatment of the principal diagnosis. A procedure is one that is surgical in nature, carries a procedural risk, carries an anaesthetic risk, requires specialised training, or requires special facilities or equipment only available in an acute setting. The procedures encompassed in the ICD-9-CM classification include surgical procedures and also non-surgical investigative and therapeutic procedures such as X-rays and chemotherapy.

Procedures are not undertaken for all hospital admissions so only a proportion of the separation records includes principal procedure data. For example, fewer than 40% of the reports for separations with principal diagnoses within the *Mental disorders* and *Infectious and parasitic diseases* chapters included principal procedures in 1995–96.

The tables and figures in this chapter use the information on the principal procedure reported for the separations using ICD-9-CM codes. The tables include the numerical codes and abbreviated descriptions of the categories. Full descriptions are available in the Australian edition of ICD-9-CM, implemented in July 1995 (National Coding Centre 1995).

Information in this chapter is presented using three methods of grouping records based on the ICD-9-CM principal procedure code. Tables and figures using the first two methods incorporate all separations, while those using the third do not:

- ICD-9-CM chapters—these 16 groups provide information aggregated at the ICD-9-CM chapter level (Figures 6.1 and 6.2);
- ICD-9-CM procedure groups—these groupings were chosen to provide more detailed information than ICD-9-CM chapter headings, but still at a manageable level (Tables 6.1 to 6.10). Note that these groups vary slightly from those used in previous Hospital Utilisation and Costs Study reports (for example, Cook 1996);
- 3-digit ICD-9-CM codes that accounted for the highest numbers of separations in the public and private sectors—this method provides information at a level enabling analysis of more specific procedures rather than groups of procedures (Tables 6.11 to 6.18 and Tables D3 and D4 on the diskette). Information in the National Hospital Morbidity Database includes even finer detail (that is, at the 4-digit code level as detailed in ICD-9-CM).

Tables are presented with summary national separation, patient day and length of stay statistics for public and private hospitals. In addition, the data are presented by State and Territory and by age group and sex. Separations for which procedures other than the principal procedure were reported have been analysed by principal procedure only.

# Highlights

## National

Overall, there were 3.5 million separations for which a principal procedure was reported, 67% of total separations. In terms of patient days, 12 million patient days were reported for separations with a principal procedure, 52% of the total.

Principal procedures were reported for varying proportions of separations in the ICD-9-CM chapter principal diagnoses groups. High proportions of separations for the *Neoplasms* (86%), *Diseases of the blood and blood-forming organs* (83%), *Diseases of the nervous system and sense organs* (82%) and *Diseases of the genitourinary system* (83%) chapters had principal procedures reported. In contrast, principal procedures were reported for smaller proportions of separations with principal diagnoses in the *Mental disorders* (23%), *Infectious and parasitic diseases* (34%) and *Diseases of the respiratory system* (35%) chapters.

Figures 6.1 and 6.2 provide a summary by principal procedure (using ICD-9-CM chapters) of separations from Australian hospitals during 1995–96. Comparing separations for males and females, in both the public and private sectors males had higher proportions of separations for *Operations on the cardiovascular system* and, as expected, *Operations on the male genital organs*. Females dominated the *Operations on female genital organs* and the *Obstetrical procedures* group. Overall, *Miscellaneous diagnostic and therapeutic procedures* accounted for the largest proportion of public hospital separations for which a principal procedure was reported, and *Operations on the digestive system* dominated the private sector separations.

## Sector

Public hospitals accounted for 64% of the separations with reported principal procedures, although they accounted for 70% of the separations overall. Similarly, although 75% of overall patient days were in public hospitals, only 70% of patient days associated with principal procedures were in public hospitals. This reflected the higher proportion of separations in the private sector that were reported with a principal procedure, compared with the public sector. In public hospitals, 62% of total separations involved a principal procedure, and these separations were associated with 49% of total patient days (Table 6.1). In contrast, in private hospitals, 81% of total separations involved a principal procedure, and these separations were associated with 62% of total patient days (Table 6.2).

The group of principal procedures which accounted for the most separations in public hospitals was *Other operations on vessels* (390–399). The principal procedure which was responsible for most of these separations was *Haemodialysis* (39.95); this accounted for 95% of this group.

In private hospitals the largest group of principal procedures was *Incision, excision and anastomosis of intestine* (450–459). This group also ranked third in public hospitals and second when combining public and private hospitals. The principal procedures which accounted for most of the separations in this group were diagnostic endoscopies (45.11–45.14, 45.16, 45.21–45.25), 85% of the group overall.

The third largest group for public and private hospitals combined, and second largest in both public and private hospitals was *Other nonoperative procedures* (990–999). The single principal procedure which was responsible for most of these separations was *Chemotherapy* (99.25), 57% of the group overall.

It should be noted, however, that the rankings of these principal procedure groups depend to some extent on the chosen groups of procedure codes.

## Age and sex

There was no difference between males and females in the proportion of separations with principal procedures, with both groups recording 67% (Tables 6.7 and 6.8). For both males and females, the two groups of principal procedures with the most separations were *Other operations on vessels* and *Incision, excision and anastomosis of intestine*.

For males, the age group for which the highest number of separations with principal procedures was reported was the 65 to 74 years age group (Table 6.17). However, there was a great variation in the age distribution for the different 3-digit procedures, with males under the age of 5 years dominating the *Respiratory therapy* and *Circumcision* groups, for example.

For females the age group with the largest number of separations with principal procedures was the 25 to 34 years age group (Table 6.18). Older females were more frequently reported for principal procedure groups such as *Extracapsular extraction of lens by fragmentation and aspiration technique* (134) and *Transfusion of blood and blood components* (990).

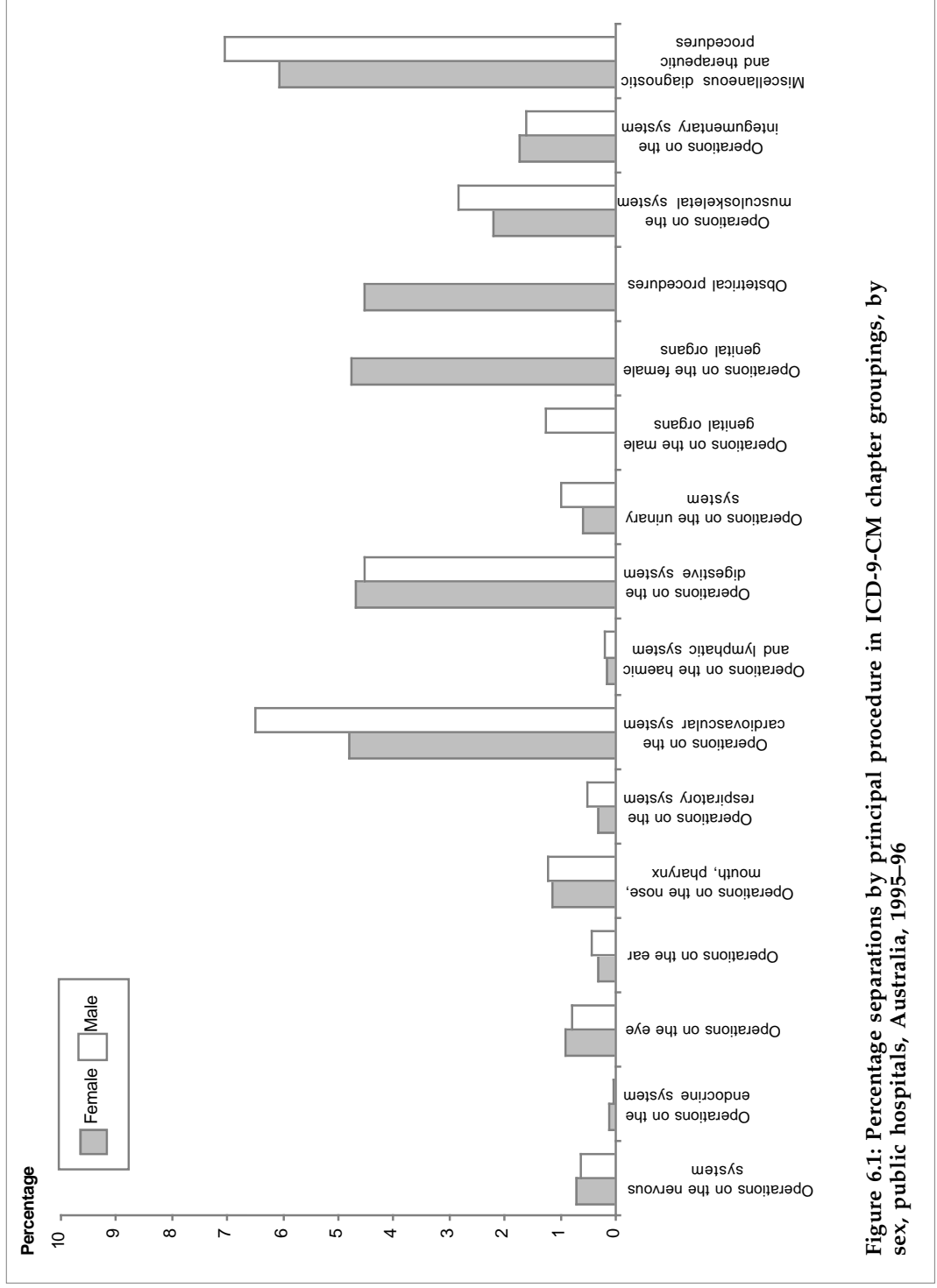


Figure 6.1: Percentage separations by principal procedure in ICD-9-CM chapter groupings, by sex, public hospitals, Australia, 1995-96

