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Health and Welfare**

*Authoritative information and statistics
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Identifying palliative care separations in admitted patient data

Technical paper

October 2011

Australian Institute of Health and Welfare
Canberra

Cat. no. HWI 113

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ISBN 978-1-74249-211-7

Suggested citation

Australian Institute of Health and Welfare 2011. Identifying palliative care separations in admitted patient data: technical paper. Cat. no. HWI 113. Canberra: AIHW.

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Published by the Australian Institute of Health and Welfare

Please note that there is the potential for minor revisions of data in this report. Please check the online version at <www.aihw.gov.au> for any amendments.

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Acknowledgments

The author of this technical paper is Dr Adriana Vanden Heuvel from the Mental Health and Palliative Care Unit (MHPCU) of the Australian Institute of Health and Welfare (AIHW). The valued input provided by Mr Gary Hanson, Ms Jenny Hargreaves, Mr George Bodilsen, Ms Vicki Bennett, Mr Brent Diverty, Ms Louise York, Ms Jodee Njeru and Ms Miriam Lum On (all from the AIHW) is gratefully acknowledged. Thanks are also extended to Ms Michelle Shek, from the MHPCU, for her valued assistance.

The Australian Government Department of Health and Ageing provided financial support to the AIHW to produce this technical paper.

Finally, this paper would not have been possible without the cooperation and efforts of the data providers in the health authorities of the states and territories, as well as the national Palliative Care Working Group.

Abbreviations

AACR	Australasian Association of Cancer Registries
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
DoHA	Australian Government Department of Health and Ageing
ICD-9-CM	International Statistical Classification of Diseases, ninth revision, Clinical Modification
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, tenth revision, Australian Modification
METeOR	Metadata Online Registry
MHPCU	Mental Health and Palliative Care Unit
NCCH	National Centre for Classification in Health
NCC	National Coding Centre
NHMD	National Hospital Morbidity Database
NMDS	National Minimum Data Set
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
SA	South Australia
Tas	Tasmania
Vic	Victoria
WA	Western Australia

Symbols

..	not applicable
%	per cent
n.p.	not published

Executive summary

This paper explores the most appropriate method of identifying those admitted patient separations in national hospital data for which palliation was a substantial component of the care provided. Three different approaches to identifying such separations are considered: using 'Care type' information only (that is, the customary approach), using diagnosis information only, and using both 'Care type' and diagnosis information.

What do the coding and collection rules tell us?

An examination of the data collection rules for the 'Care type' data item indicates that, by definition, the principal clinical intent or treatment goal of separations with a 'Care type' of *Palliative care* is palliation. Likewise, by definition, the principal clinical intent or treatment goal for those separations with a diagnosis code of *Palliative care* is palliation, although this intent may have been applicable for part, not necessarily all, of the separation.

What do the results from analyses of data tell us?

Analyses of admitted patient data for 1999–00 to 2008–09 show that which of the three approaches is chosen to identify palliative care separations has a substantial impact on the number of separations identified. For example, in 2008–09, compared with using only 'Care type' information, 73% more palliative care separations would be identified across Australia if only diagnosis information was used; correspondingly, 77% more separations would be identified using both 'Care type' and diagnosis information.

The 2008–09 data also show state and territory differences in the approach used to assign *Palliative care* as a 'Care type' and/or a diagnosis code. In Queensland, Western Australia and the Australian Capital Territory, there was virtually a one-to-one correspondence between the recording of *Palliative care* as the 'Care type' and as a diagnosis. This was not the case for the remaining five jurisdictions. In these five jurisdictions, the number of separations having a 'Care type' and/or a diagnosis code of *Palliative care* was at least double the number with only a 'Care type' of *Palliative care*.

Do the types of separations identified differ?

An examination of patient characteristics (such as diagnosis) and the nature of the separations (such as length of the separation) showed, in a few instances, some variability in the coding pattern of palliative care separations. However, there were no clear, systematic differences such as those found when state and territory data were considered.

What approach is recommended?

In order to identify those admitted patient separations for which palliation was the principal clinical intent or treatment goal for either part or all of the separation, the use of both 'Care type' and diagnosis information is recommended. This approach was endorsed by the national Palliative Care Working Group at its meeting in March 2011. It will be used in further work by the AIHW when the aim is to capture those admitted patient separations for which palliative care was a substantial component of the care provided.

1 Introduction

When considering national hospital data, how does one best identify those admitted patient separations for which palliative care was a substantial component of the care provided? The Australian Institute of Health and Welfare (AIHW) undertook to answer this question before starting work on a report that analysed changes in admitted patient palliative care separations over time (AIHW 2011). The results from those preliminary investigations are detailed in this technical paper.

In the past, identifying palliative care separations in admitted patient data has been based on information from the 'Care type' data item. For each admitted patient separation that occurs in Australian hospitals, a code indicating the principal clinical intent and/or treatment goal of that separation is assigned to the 'Care type' data item. Options for this data item include, among others, *Acute care*, *Palliative care*, and *Rehabilitation care*. The customary approach in identifying palliative care separations is to consider only those separations for which 'Care type' was coded as *Palliative care* (e.g. AIHW 2003, 2010a; Rosenwax & McNamara 2006).

However, existing research has noted that identifying palliative care separations in this way can be problematic since varying practices are followed across and within jurisdictions in the use of statistical discharges and in the assignment of 'Care type' (AIHW 2003, 2010a; DoHA (WestWood Spice) 2005; Jellie & Shaw 1999; WA Department of Health 2006). Reasons for these varying practices include differences not only in performance and accountability requirements, but also in organisational arrangements and the information systems used. As a consequence, the sole use of the 'Care type' data item to identify palliative care separations could affect the comparability of these data across jurisdictions. Furthermore, it could lead to an undercount of the number of separations for which palliation was a substantial component of the care provided (AIHW 2003, 2010a; Jellie & Shaw 1999).

Rather than relying solely on the 'Care type' data item, two other approaches to identifying palliative care separations could be used. This paper considers the implications of using one approach over another to identify palliative care separations, as well as which approach is most appropriate to identify those separations for which palliation was a substantial component of the care provided. Relevant collection and coding rules are described (Section 2), as are the number of admitted patient separations that would be identified by each of three possible approaches (Section 3) and the characteristics of those separations (Section 4). The paper concludes with a recommended approach.

Note that since the aim of this paper is to identify the most robust method of enumerating separations for which palliation was a substantial component of the care *provided*, it does not address the issue of the *demand* for palliative care. Furthermore, the paper deals with palliative care provided in the admitted patient setting; it does not consider palliative care provided in non-admitted patient settings such as in the community, residential aged care facilities or emergency departments. Currently, no comprehensive data set exists to provide national information on palliative care provision in settings other than in admitted patient care.

Data source

Data for this paper were sourced from the National Hospital Morbidity Database (NHMD). This database, which is compiled by the AIHW, includes summary records for patients admitted to public and private hospitals in Australia. Data on separations in hospices and palliative care units that are affiliated with hospitals are included in the NHMD. Since this database is episode based, it is not possible to determine the number of *people* who received palliative care. Further information about the NHMD is provided in Appendix A.

Three options

As noted above, to date, palliative care separations in Australian admitted patient data have been identified using information from the 'Care type' data item. However, since there is a code for *Palliative care* in the coding system used to classify diagnoses (namely, the *International Statistical Classification of Diseases and Related Health Problems, 10th revision, Australian Modification* (ICD-10-AM) (NCCCH 2010b), the provision of palliative care can also be identified using diagnosis information. Thus, palliative care separations in the NHMD could be identified using one of three options. These options are:

- Option 1:* those separations in which *Palliative care* was coded as the 'Care type' (that is, the customary approach)
- Option 2:* those separations in which *Palliative care* was coded as a diagnosis (that is, ICD-10-AM diagnosis code of Z51.5)
- Option 3:* those separations in which *Palliative care* was coded as the 'Care type' and/or a diagnosis.

This paper examines which of these three options is most appropriate to identify those separations for which palliation was a substantial component of the care provided.

A fourth method of identifying palliative care separations was initially considered – that is, including those separations in which a diagnosis code indicated that the *Person was awaiting admission to a palliative care facility or unit* (i.e. ICD-10-AM diagnosis code of Z75.14). However, since this diagnosis code indicates a *demand* for palliative care services, rather than the *provision* of such services, this fourth method was not included in the options considered in this paper. Note that the number of separations that are assigned the diagnosis code of Z75.14 does not tend to be large. For example, 423 admitted patient separations (out of a total of over 8 million separations) were assigned this code in 2008-09. Furthermore, 193 (46%) of the 423 separations also had either a 'Care type' or a diagnosis code of *Palliative care*. Thus, almost half of the separations with a code that indicated that the person was waiting for palliative care would be captured in at least two of the three approaches considered.

2 Collection and coding rules

This section describes specifications and standards that applied to the coding and collection of information about 'Care type' and diagnoses in admitted patient data from 1999–00 to 2008–09. The information was sourced from the *National health data dictionary* (AIHW 2010b), the *Admitted patient care national minimum data set* (AIHW 2010c) and, in regard to the recording of diagnoses, the *Australian coding standards* (NCCH 2008).

The 'Care type' data item

Since the NHMD is an episode-based (rather than a patient-based) database, each record is based on a single episode of care (which is also called a separation) for an admitted patient. The overall nature of the clinical service provided during a separation is described by the 'Care type' data item (AIHW 2010b), with one of the 'Care type' options being *Palliative care*. A full list of the coding options for 'Care type' is shown in Appendix B.

It is not always the case that the length of a separation equates to the total length of time that a patient was hospitalised during a particular stay. When an admitted patient receives only one type of care during a hospital stay (such as only acute care or only palliative care), the length of stay for that separation is equal to the total length of time they spent in hospital during that stay. However, some patients receive two or more types of care during one hospital stay. For example, a patient may be admitted for active cancer treatment but later be reclassified as a palliative care patient. In such a case, the first episode of care would be completed by a 'statistical separation', and a new episode of care would be started through a 'statistical admission' (WA Department of Health 2004). Thus, for such a patient, two episodes of care, or separations, would be recorded during the one hospital stay, with each separation having a different 'Care type' code.

In the data collection specifications for the 'Care type' data item, palliative care is defined as follows (AIHW 2010b):

Palliative care is care in which the clinical intent or treatment goal is primarily quality of life for a patient with an active, progressive disease with little or no prospect of cure. It is usually evidenced by an interdisciplinary assessment and/or management of the physical, psychological, emotional and spiritual needs of the patient; and a grief and bereavement support service for the patient and their carers/family. It includes care provided:

- in a palliative care unit
- in a designated palliative care program, or
- under the principal clinical management of a palliative care physician or, in the opinion of the treating doctor, when the principal clinical intent of care is palliation.

There are four possible codes in the 'Care type' data item that can be assigned when the care provided was palliative. A code of '3.0' refers to all of the applicable types of palliative care. Optionally, a code of '3.1', '3.2' or '3.3' can be recorded in order to indicate the specific type

of palliative care provided. Thus, the full range of palliative care codes in the 'Care type' data item is as follows:

- 3.0 Palliative care (all applicable types of palliative care)
- 3.1 Palliative care delivered in a designated unit (optional)
- 3.2 Palliative care delivered according to a designated program (optional)
- 3.3 Palliative care is the principal clinical intent (optional).

During the period considered in this paper (1999–00 to 2008–09), the majority of jurisdictions did not assign the optional codes for palliative care; instead, palliative care was generally indicated with the code of '3.0'. For example, in 2008–09, most (72%) separations for which the 'Care type' was *Palliative care* had a code of '3.0' rather than a more specific code. Furthermore, five of the eight jurisdictions did not assign any codes other than '3.0' to indicate that the 'Care type' was *Palliative care*. Thus, for this paper (as has been done in the past), all separations that were coded with any of the four applicable *Palliative care* codes were grouped together when identifying palliative care separations using the 'Care type' data item.

Three different specifications for the collection of the 'Care type' data item applied between 1999–00 and 2008–09 (see Appendix B). For each of these specifications, the code set that applied for palliative care separations was the same. That is, throughout the period considered, the same four code options (3.0 to 3.3) were available to indicate that the clinical intent of the care was palliation.

Nonetheless, between 1999–00 and 2000–01, there were some changes in the applicable code sets for separations other than those for palliative care. For example, for the 1999–00 collection, a single overarching code of *Non-acute care* was used to capture types of care that could be, in 2000–01 and later years, coded to the following more specific categories: *Geriatric evaluation and management*, *Psychogeriatric care* and *Maintenance care*. It is not clear whether or not the narrower code set used for the 1999–00 NHMD data collection would have had any effect (and, if so, its direction) on the comparability of the palliative care data for that year with that for later years.

Diagnosis data items

As part of the collection of data in Australian hospitals, a principal diagnosis is assigned to each episode of admitted patient care. As well, one or more additional diagnoses may also be assigned. The principal diagnosis is defined as 'the diagnosis established after study to be chiefly responsible for occasioning an episode of admitted patient care' (AIHW 2010b; NCCH 2010a). Additional diagnoses are 'conditions or complaints either coexisting with the principal diagnosis or arising during the episode of admitted patient care'; such diagnoses give information on the 'conditions that were significant in terms of treatment required, investigations needed and resources used during the episode of care' (AIHW 2010b; NCCH 2010a). Note that while diagnosis codes usually describe a disease, injury or poisoning, they can also be used to indicate the specific care or service provided for a current condition or other reasons for hospitalisation (AIHW 2009). This is the case when *Palliative care* is recorded as a diagnosis code.

During the early years of the NHMD collection, diagnosis information was coded using the ninth revision of the ICD (i.e. ICD-9-CM) (NCC 1995). In 1998–99, hospitals in Australia began to move towards using an Australian version of ICD-10 (ICD-10-AM) for the coding of

diagnoses. The first full year for which national data are available based on ICD-10-AM is 1999–00. Hence, data are presented in this paper from that year onwards.

Over the years of admitted patient data considered in this paper, different editions of ICD-10-AM applied, starting with the first edition (which applied to the 1999–00 data collection) through to the sixth edition (which applied to the 2008–09 collection). For each of those editions, a specific coding standard – namely, standard ‘0224’ – applied to the recording of *Palliative care* as a diagnosis.

Coding standard in the sixth edition of ICD-10-AM

The ICD-10-AM coding standard ‘0224’, as worded in the sixth edition, includes two parts: a *definition* of palliative care, and *classification rules* (see Appendix C). In this coding standard, the *definition* of palliative care is identical to the one used for the ‘Care type’ data item. Thus, as was the case for the ‘Care type’ data item, *Palliative care*, when assigned as a diagnosis code, describes care in which the clinical intent or treatment goal is primarily quality of life. It includes care provided:

- in a palliative care unit
- in a designated palliative care program, or
- under the principal clinical management of a palliative care physician or, in the opinion of the treating doctor, when the principal clinical intent of care is palliation.

The classification rules in the coding standard provide an additional instruction on when *Palliative care* should be assigned as a diagnosis code. Those rules state that *Palliative care* should be assigned when the intent of care at admission is for palliation or, *if at any time during the admission*, the intent of care becomes palliation, and the care provided to the patient meets the definition above.

Coding standard in earlier editions of ICD-10-AM

With the exception of the first and second editions, the wording of coding standard ‘0224’ in the various ICD-10-AM editions was identical to the wording in the sixth edition. In the second edition, while the classification rules were identical, the wording of the definition of palliative care was similar although not identical to that used in later editions (NCCH 2000). Importantly, though, the definition in the second edition of ICD-10-AM specifically noted that palliative care included care provided in a palliative care unit, in a designated palliative care program and where the principal intent of the care was palliation; this matches the three inclusions listed in the definition of palliative care in the subsequent editions of ICD-10-AM.

In contrast, in the first edition, the definition of palliative care was much narrower than those used in the later editions. In particular, few details were provided on what palliative care is (NCCH 1998). As well, reference was made only to care provided by a palliative care team, rather than to care provided in a palliative care unit, in a designated palliative care program and where the principal intent of the care was palliation. Owing to these differences, any observed increase in the number of separations with a diagnosis code of *Palliative care* between 1999–00 (when the first edition of the ICD-10-AM was in use) and later years may be at least partly due to the narrower definition of palliative care used for the 1999–00 NHMD data collection compared with subsequent years.

Principal diagnosis versus additional diagnosis

In each of the ICD-10-AM editions between 1999–00 and 2008–09, coding standard ‘0224’ included a classification rule that indicated that *Palliative care* should be assigned as an *additional* diagnosis, not a *principal* diagnosis. Despite this consistent instruction, an analysis of data in the NHMD suggests that this classification rule was not always adhered to since *Palliative care* was assigned as a principal diagnosis in all of the years considered. However, as shown in Appendix D, the frequency with which this occurred decreased over time from 763 separations in 1999–00 to 1 separation in 2008–09.

Since *Palliative care* was at times assigned as the principal diagnosis, all separations that had a diagnosis code of *Palliative care* – regardless of whether it was a principal or an additional diagnosis – are included in this paper when considering the number of admitted patient separations with a diagnosis code of *Palliative care*.

Summary

The aim of this paper is to examine how best to identify those admitted patient separations within national hospital data for which palliation was a substantial component of the care provided. Data items in the NHMD that provide information on the provision of palliative care are ‘Care type’ and diagnosis. By definition, the principal clinical intent or treatment goal of those separations with a ‘Care type’ of *Palliative care* is palliation.

For those separations with a diagnosis code of *Palliative care*, the principal clinical intent is also defined to be palliation but this code may be applied if this held true for either *part*, or all, of the separation. Nonetheless, since palliative care was the primary clinical intent for at least part of these separations, a substantial component of the care provided during those separations would have been palliation. Thus, based on a review of the coding standards and data collection specifications, it can be concluded that ‘Care type’ and diagnoses data items are both relevant when identifying separations of interest.

As discussed earlier, when the clinical intent of the care that an admitted patient is receiving changes from one type of care to another (such as from acute care to palliative care), a statistical discharge and accompanying statistical admission should occur, resulting in a different ‘Care type’ being assigned for the second separation. Thus, when the intent of care changes to palliation during a hospitalisation and a diagnosis code of *Palliative care* is assigned, one might expect there to also be a corresponding statistical discharge and admission, with a ‘Care type’ of *Palliative care* assigned to the new separation. In turn, based on the definitions and coding rules, a one-to-one correspondence between a code of *Palliative care* as the ‘Care type’ and as a diagnosis could be expected. Information on whether this is the case in practice is discussed in the next section of this paper.

3 Number of palliative care separations

Three different approaches to identifying palliative care separations in admitted patient data were proposed earlier in this paper. These approaches use 'Care type' information (referred to as option 1), diagnosis information (option 2), and both 'Care type' and diagnosis information (option 3). In this section, the number of palliative care separations that would be identified using each of the three approaches is compared. Changes over time, and differences by jurisdiction and hospital sector, are also described.

Palliative care separations over time

The number of admitted patient separations that would be identified as palliative care separations from 1999–00 to 2008–09 using the three different approaches is shown in Table 3.1. Using the customary approach (i.e. option 1), the number of palliative care separations ranged from 21,341 in 1999–00 to 29,543 in 2008–09, increasing from one year to the next in all cases but one (i.e. the number fell by 3% between 2006–07 and 2007–08). Over the 10-year period considered, there was a 38% increase in the number of palliative care separations identified by 'Care type'.

In contrast, the number of palliative care separations identified using only diagnosis information (i.e. option 2) increased by 98% over the 10-year period, ranging from 25,795 in 1999–00 to 50,995 in 2008–09. There was an increase in the number of such separations from one year to the next in all cases, with a particularly large increase (of 20%) between 1999–00 and 2000–01. This atypically large increase may be at least partly due to the broadening of the definition of palliative care associated with the coding of diagnosis information from 2000–01 onwards (as discussed in Section 2).

For each of the years considered, there were more separations with a diagnosis code of *Palliative care* (option 2) than with a 'Care type' of *Palliative care* (option 1). Nonetheless, it is not the case that all separations that had a 'Care type' of *Palliative care* also had a corresponding diagnosis code of *Palliative care* (see Table 3.2 and Appendix E). In 1999–00, for instance, over one-third (36%) of separations with a 'Care type' of *Palliative care* did not have a corresponding diagnosis code of *Palliative care*, while, in the following year, 26% did not. In later years, the proportion of separations that had a 'Care type' of *Palliative care* but not a diagnosis code of *Palliative care* was smaller (e.g. 5% in both 2007–08 and 2008–09).

The number of separations that would be considered to be palliative care separations using both 'Care type' and diagnosis information (i.e. option 3) ranged from 33,523 in 1999–00 to 52,347 in 2008–09 (Table 3.1). This equates to an increase of 56% in the number of palliative care separations over the 10-year period.

The number of separations identified by option 3 was larger than the number identified by the other two options for all of the years considered. For example, in 2008–09, 1.73 times as many palliative care separations would be identified by option 2 than by option 1 (50,995 compared with 29,543 separations), while the corresponding ratio for option 3 compared with option 1 is 1.77 (52,347 compared with 29,543 separations).

Table 3.1: Palliative care separations as identified by 3 different approaches^(a), all hospitals, 1999–00 to 2008–2009

	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	% change since 1999–00
Number of separations											
Option 1: Care type	21,341	23,307	23,558	24,415	24,959	25,126	25,741	28,273	27,364	29,543	38.4
Option 2: Diagnosis	25,795	30,931	31,838	33,491	37,011	41,178	43,353	45,323	47,112	50,995	97.7
Option 3: Care type and/or diagnosis	33,523	36,980	36,667	37,996	40,435	42,622	45,134	47,472	48,631	52,347	56.2
% change from previous year											
Option 1: Care type	..	9.2	1.1	3.6	2.2	0.7	2.4	9.8	-3.2	8.0	..
Option 2: Diagnosis	..	19.9	2.9	5.2	10.5	11.3	5.3	4.5	3.9	8.2	..
Option 3: Care type and/or diagnosis	..	10.3	-0.8	3.6	6.4	5.4	5.9	5.2	2.4	7.6	..
Ratio											
Option 2 / Option 1	1.21	1.33	1.35	1.37	1.48	1.64	1.68	1.60	1.72	1.73	..
Option 3 / Option 1	1.57	1.59	1.56	1.56	1.62	1.70	1.75	1.68	1.78	1.77	..

(a) 'Option 1' includes all those separations in which the 'Care type' was *Palliative care*. 'Option 2' includes all those separations in which a diagnosis code was *Palliative care*. 'Option 3' includes all those separations in which 'Care type' and/or a diagnosis code was *Palliative care*.

Source: National Hospital Morbidity Database, AIHW.

Table 3.2: Diagnosis code of *Palliative care* for those separations with a 'Care type' of *Palliative care*, all hospitals, 1999–00 to 2008–09

	Diagnosis code of <i>Palliative care</i> (%)	No diagnosis code of <i>Palliative care</i> (%)	Total with 'Care type' of <i>Palliative care</i> ^(a)	
			Percentage	Number
1999–00	63.8	36.2	100.0	21,341
2000–01	74.0	25.9	100.0	23,307
2001–02	79.5	20.4	100.0	23,558
2002–03	81.5	18.4	100.0	24,415
2003–04	86.3	13.6	100.0	24,959
2004–05	94.3	5.7	100.0	25,126
2005–06	93.1	6.8	100.0	25,741
2006–07	92.4	7.5	100.0	28,273
2007–08	94.4	5.4	100.0	27,364
2008–09	95.4	4.6	100.0	29,543

(a) Includes separations for which information on diagnosis was not reported (see Appendix E).

Source: National Hospital Morbidity Database, AIHW.

Overall, analysis of the data indicates that the one-to-one correspondence between a 'Care type' of *Palliative care* and a diagnosis code of *Palliative care* that might be expected based on the collection and coding rules is not evident at the national level. Instead, the data suggest that which of the three options is chosen to identify palliative care separations in admitted patient data will have a substantial impact on the number of separations identified. In particular, for each of the years considered, the customary approach of identifying palliative care separations based solely on 'Care type' information provides the lowest count of such separations.

Furthermore, the data show that the difference in the number of palliative care separations that would be identified using the customary approach compared with each of the other two approaches increased over time. For example, compared with the customary approach, there were 21% more separations with a diagnosis code of *Palliative care* in 1999–00, and 57% more with a diagnosis code and/or a 'Care type' code of *Palliative care*. By 2008–09, the corresponding percentages were 73% and 77% (Table 3.1).

Palliative care separations by sector and jurisdiction

In this section, the number of palliative care separations that would be identified for 2008–09 using the three different approaches is compared according to the hospital sector and the state or territory in which the care was provided.

As shown in Table 3.3, in both public and private hospitals, the number of palliative care separations identified using only diagnosis information (option 2) or both diagnosis and 'Care type' information (option 3) was considerably higher than the number identified using only 'Care type' information (option 1). For example, in public hospitals, there were 1.8 times as many palliative care separations identified using option 3 compared with option 1. For private hospitals, the corresponding ratio was 1.5 times.

Table 3.3: Palliative care separations as identified by 3 different approaches^(a) by states and territories, public and private hospitals, 2008–09

	NSW	Vic	Qld	WA	SA	Tas ^(b)	ACT ^(b)	NT ^(b)	Total ^(a)
Public hospitals									
<i>Number of separations</i>									
Option 1: Care type	9,345	5,652	5,457	1,245	1,298	304	609	352	24,262
Option 2: Diagnosis	17,834	13,362	5,452	1,246	2,979	883	682	719	43,157
Option 3: Care type and/or diagnosis	18,591	13,362	5,457	1,246	3,389	916	699	745	44,405
<i>Ratio</i>									
Option 2 / Option 1	1.91	2.36	1.00	1.00	2.30	2.90	1.12	2.04	1.78
Option 3 / Option 1	1.99	2.36	1.00	1.00	2.61	3.01	1.15	2.12	1.83
Private hospitals									
<i>Number of separations</i>									
Option 1: Care type	434	506	1,949	2,156	221	n.p.	n.p.	n.p.	5,281
Option 2: Diagnosis	1,145	1,408	1,949	2,156	875	n.p.	n.p.	n.p.	7,838
Option 3: Care type and/or diagnosis	1,211	1,408	1,949	2,156	906	n.p.	n.p.	n.p.	7,942
<i>Ratio</i>									
Option 2 / Option 1	2.64	2.78	1.00	1.00	3.96	n.p.	n.p.	n.p.	1.48
Option 3 / Option 1	2.79	2.78	1.00	1.00	4.10	n.p.	n.p.	n.p.	1.50
All hospitals									
<i>Number of separations</i>									
Option 1: Care type	9,779	6,158	7,406	3,401	1,519	n.p.	n.p.	n.p.	29,543
Option 2: Diagnosis	18,979	14,770	7,401	3,402	3,854	n.p.	n.p.	n.p.	50,995
Option 3: Care type and/or diagnosis	19,802	14,770	7,406	3,402	4,295	n.p.	n.p.	n.p.	52,347
<i>Ratio</i>									
Option 2 / Option 1	1.94	2.40	1.00	1.00	2.54	n.p.	n.p.	n.p.	1.73
Option 3 / Option 1	2.02	2.40	1.00	1.00	2.83	n.p.	n.p.	n.p.	1.77

(a) 'Option 1' includes all those separations in which the 'Care type' was *Palliative care*. 'Option 2' includes all those separations in which a diagnosis code was *Palliative care*. 'Option 3' includes all those separations in which 'Care type' and/or a diagnosis code was *Palliative care*.

(b) To ensure confidentiality of information, data for private hospitals in Tasmania, the Australian Capital Territory and the Northern Territory are not shown. The 'Total' includes data for all jurisdictions.

Source: National Hospital Morbidity Database, AIHW.

The number of palliative care separations for 2008–09 according to jurisdiction is also shown in Table 3.3. To ensure the confidentiality of information, data for private hospital separations in the Australian Capital Territory, the Northern Territory and Tasmania are not shown (see Appendix A for further details). Note that when interpreting differences in the palliative care data between jurisdictions, the fact that palliative care (and other health-care services) are delivered within the complex and diverse Australian health system should be taken into account. In particular, observed differences in the data by jurisdiction may be due to a number of factors. These factors include state and territory differences in: service delivery practices, admitted patient admission and separation practices, the types of establishments categorised as hospitals, demographic characteristics of the population (and thus the need for palliative and other health-care services), and information management systems and practices.

Data in Table 3.3 indicate that which of the three options is used to identify palliative care separations affects the number of such separations that would be identified in 2008–09 in five of the eight jurisdictions. Specifically, in Queensland and Western Australia, there is a one-to-one correspondence such that virtually all separations that had a ‘Care type’ of *Palliative care* also had a diagnosis code of *Palliative care*. Furthermore, this one-to-one correspondence applied to both public and private hospitals within these two states. In addition, in public hospitals in the Australian Capital Territory, there was a very high level of correspondence between the coding of *Palliative care* as the ‘Care type’ and a diagnosis.

In sharp contrast, in the other five jurisdictions, no such one-to-one correspondence is found. For example, in South Australia, 2.8 times as many palliative care separations would be identified using option 3 than option 1. For Victoria, the corresponding ratio is 2.4, and for New South Wales, 2.0. In each of these jurisdictions, the differences in the number of palliative care separations that would be identified using the three options applied to both the public and private hospital data, although the extent of difference was greater in the private hospital data than the public hospital data.

For Tasmania, the number of palliative care separations in public hospitals with a ‘Care type’ and/or diagnosis code of *Palliative care* (option 3) was 3.0 times larger than the number with only a ‘Care type’ of *Palliative care*; in public hospitals in the Northern Territory, the corresponding ratio was 2.1 times.

Summary

A comparison of the number of palliative care separations that would be identified using the three different approaches leads to the conclusions outlined below.

First, for each of the years considered, the customary approach of identifying palliative care separations (that is, based solely on ‘Care type’ information) suggests a smaller number of palliative care separations than the other two approaches.

Second, over time, there has been an increase in the extent of difference in the number of palliative care separations identified using the customary approach compared with the two other approaches. This suggests that the implications of which option is used to identify admitted patient palliative care separations differ depending on what year is being considered.

Third, not all separations that had a ‘Care type’ of *Palliative care* also had a diagnosis code of *Palliative care*. However, in the later years for which data are considered in this paper, there

was a greater likelihood that separations that had a 'Care type' of *Palliative care* also had a corresponding diagnosis code of *Palliative care*.

Fourth, it is apparent that differences exist between the jurisdictions in the approach used to code separations that involve the provision of palliative care. In 2008–09, in three of the jurisdictions, virtually all separations with a 'Care type' of *Palliative care* also had a diagnosis code of *Palliative care*; there was basically a one-to-one correspondence between these data items. This was not the case for the remaining jurisdictions, with the number of separations with a diagnosis code of *Palliative care* consistently larger than the number of separations with a 'Care type' of *Palliative care*. These results clearly indicate that which of the three options is chosen to identify palliative care separations would be of little or no consequence for the number of separations identified for three of the jurisdictions, but it would make a substantial difference for the remaining five jurisdictions.

4 Profile of the palliative care separations

Are there inherent differences in the types of palliative care separations that are identified in admitted patient data using one pattern of recording the provision of palliative care versus another? This is the question addressed in this section of the paper. There are three possible patterns of recording the provision of palliative care in admitted patient data:

- assign *Palliative care* as the 'Care type' but not as a diagnosis
- assign *Palliative care* as a diagnosis but not as the 'Care type'
- assign *Palliative care* as both the 'Care type' and a diagnosis (note, this pattern relates only to those separations for which *Palliative care* was assigned to *both* data items. This is not the same as option 3, as described in previous sections, which includes separations identified through each of the three coding patterns listed here).

First, differences by state and territory are examined in this section. Second, where the care was provided, in terms of the sector and the type of hospital, is considered. Third, differences in the characteristics of the separations (for example, diagnosis and length of the separation) are discussed.

Differences by jurisdiction

In Section 3, the analyses indicated that in 2008–09, in Queensland, Western Australia and the Australian Capital Territory, there was virtually a one-to-one correspondence between the recording of *Palliative care* as the 'Care type' and a diagnosis. Table 4.1 shows that for these three jurisdictions, taken as a group, 99% of palliative care separations had both a 'Care type' and a diagnosis code of *Palliative care*, while less than 1% had either only a diagnosis code or only a 'Care type' code of *Palliative care*. This differs substantially from the remaining jurisdictions where, taken as a group, 41% of palliative care separations had been assigned both a 'Care type' and a diagnosis code of *Palliative care*, 56% had only a diagnosis code of *Palliative care*, and 3% had only a 'Care type' of *Palliative care*. Thus there is a clear, inherent difference across jurisdictions in the pattern of assigning palliative care codes.

Table 4.1: Separations by pattern of recording palliative care provision, by states and territories, all hospitals, 2008–09

	'Care type' and diagnosis code of <i>Palliative care</i>	Diagnosis code of <i>Palliative care</i> only	'Care type' of <i>Palliative care</i> only	Total
Qld, WA and ACT (%)	99.0	0.9	0.2	100.0
NSW, Vic, SA, Tas and NT (%)	41.1	55.6	3.3	100.0
Total (%)	53.9	43.6	2.6	100.0
<i>Number of separations</i>	28,191	22,804	1,352	52,347

Source: National Hospital Morbidity Database, AIHW.

Since nearly all of the palliative care separations that occurred in Queensland, Western Australia and the Australian Capital Territory are of the one type (that is, having a 'Care type' and diagnosis code of *Palliative care*), the question posed in this section is irrelevant for these three jurisdictions. Thus, the data shown in the remainder of this section pertain only to the five jurisdictions for which variation in the pattern of the assignment of palliative care codes was observed.

Where was the care provided?

For the five jurisdictions of New South Wales, Victoria, South Australia, Tasmania and the Northern Territory, there were some minor differences in the assignment of the various palliative care codes by sector in 2008–09 (Table 4.2). For instance, overall, 91% of all palliative care separations in these five jurisdictions took place in public hospitals. This compares with 94% of those separations with both a 'Care type' and a diagnosis code of *Palliative care* and 88% of those with only a diagnosis code of *Palliative care*.

Table 4.2: Separations by pattern of recording palliative care provision, by where care was provided, selected states and territories^(a), public and private hospitals, 2008–09

	'Care type' and diagnosis code of <i>Palliative care</i>	Diagnosis code of <i>Palliative care</i> only	'Care type' of <i>Palliative care</i> only	Total
Sector (%)				
Public hospital	93.6	88.3	92.2	90.6
Private hospital	6.4	11.7	7.8	9.4
<i>Total (%)</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<i>Total (number)</i>	<i>16,797</i>	<i>22,706</i>	<i>1,330</i>	<i>40,833</i>
Type of public hospital^(b) (%)				
Principal referral	16.7	70.9	16.2	46.1
Large	12.2	10.5	49.6	12.5
Medium	15.5	9.2	9.2	11.9
Small acute	2.9	4.8	6.9	4.1
Sub-acute and non-acute	24.6	2.6	9.8	12.2
Other	28.1	2.0	8.3	13.3
<i>Total (%)</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<i>Total (number)</i>	<i>15,725</i>	<i>20,052</i>	<i>1,226</i>	<i>37,003</i>

(a) Includes data for New South Wales, Victoria, South Australia, Tasmania and the Northern Territory. For the other three jurisdictions, virtually all (99%) of the palliative care separations had both a 'Care type' and diagnosis code of *Palliative care*.

(b) Information on type (or peer group) of hospital is only available for public hospitals (see Appendix F).

Source: National Hospital Morbidity Database, AIHW.

For public hospitals, information is available on the type of hospital that provided the care. The categories – which are also referred to as peer groups – indicate broadly similar groups of public hospitals in terms of geographical location, and the type and volume of admitted patient activity. Further information about the peer groups is provided in Appendix F.

Differences in how palliative care was recorded in admitted patient data are evident according to the type of public hospitals in which the care was provided (Table 4.2). In particular, while overall, 46% of palliative care separations occurred in 'Principal referral' public hospitals, a higher proportion (71%) of separations with only a diagnosis code of

Palliative care had been recorded in such hospitals. ‘Sub-acute and non-acute’ public hospitals had a disproportionately large share of palliative care separations that had been assigned both a ‘Care type’ and diagnosis code of *Palliative care* (25% compared with the overall proportion of 12%). Meanwhile, half of the separations with only a ‘Care type’ of *Palliative care* had been assigned in ‘Large’ public hospitals (50% compared with 13% of palliative care separations having occurred in such hospitals).

Characteristics of the separations

In this section, differences in the characteristics of the palliative care separations are compared across the three possible patterns of recording the provision of palliative care.

Length of hospitalisation

In Section 2 of this paper, it was noted that, by definition and according to the coding rules, the principal clinical intent of those separations with a ‘Care type’ of *Palliative care* is palliation for the entire length of the separation. In contrast, the intent of those separations with a diagnosis of *Palliative care* is palliation for either the entire length, or part, of the separation. Based on this distinction, one might expect that those palliative care separations with only a diagnosis code of *Palliative care* might be longer, on average, than those with only a ‘Care type’ of *Palliative care*.

As shown in Table 4.3, in 2008–09, for the five jurisdictions considered, there was little difference according to the three different patterns of assigning palliative care codes in the average length of stay in hospital. The average length of those separations with a ‘Care type’ and a diagnosis code of *Palliative care* was 12.7 days; it was 13.4 days for those separations with only a diagnosis code of *Palliative care*. For those separations with only a ‘Care type’ of *Palliative care*, the average length of hospital stay was 11.7 days; however, the small number of separations with this pattern of palliative care coding should be taken into account when considering these latter data.

Table 4.3: Separations by pattern of recording palliative care provision, by characteristics of the separations, selected states and territories^(a), all hospitals, 2008–09

	‘Care type’ and diagnosis code of <i>Palliative care</i>	Diagnosis code of <i>Palliative care</i> only	‘Care type’ of <i>Palliative care</i> only	Total ^(a)
Average length of stay (mean days)	12.7	13.4	11.7	13.1
Average length of stay: overnight stays only (mean days)	14.0	13.7	12.5	13.8
Same-day separations (%)	10.1	2.5	7.1	5.8
Principal diagnosis of cancer ^(b) (%)	72.0	45.0	65.4	56.8
Principal or additional diagnosis of cancer ^(b) (%)	82.7	70.5	80.0	75.8
Surgical procedure provided (%)	0.6	10.5	2.2	6.1
Separation ended with death (%)	58.7	39.0	46.1	47.3
Number of separations	16,797	22,706	1,330	40,833

(a) Includes data for New South Wales, Victoria, South Australia, Tasmania and the Northern Territory. For the other three jurisdictions, virtually all (99%) of the palliative care separations had both a ‘Care type’ and diagnosis code of *Palliative care*.

(b) Cancer was defined in accordance with the approach used for *Cancer in Australia: an overview* (AIHW & AACR 2010).

Source: National Hospital Morbidity Database, AIHW.

The data that are collected in the NHMD on the number of days that patients stay in hospital during any one separation distinguish between 'same-day' and 'overnight' separations. Same-day separations are those in which the patient was admitted and discharged on the same day. Conversely, overnight separations are those in which the patient was admitted and discharged on different days, and thus the separation involved at least one overnight stay.

When only those separations that involved an overnight stay are considered, there is even less difference in the average length of hospital stay across the three patterns of coding palliative care provision. Specifically, the average length of separations that included an overnight stay was 14.0 days for those with a 'Care type' and diagnosis code of *Palliative care*, 13.7 days for those with only a diagnosis code of *Palliative care* and 12.5 days for those with only a 'Care type' of *Palliative care*.

However, some differences in the proportions of separations that were same-day separations by the palliative care coding pattern are evident. On average in 2008–09 in the five jurisdictions, 6% of palliative care separations were same-day separations. However, a somewhat larger proportion of those palliative care separations with a 'Care type' and a diagnosis code of *Palliative care* were same-day separations (10%) compared with those with only a diagnosis code of *Palliative care* (3%).

Diagnosis

Table 4.3 also presents a comparison according to the diagnoses reported, with consideration given initially to just the principal diagnosis and, then, to both the principal and any additional diagnoses. Since Australian and overseas research has consistently shown that cancer patients comprise the majority of those using palliative care services (e.g. Currow et al. 2008; Kaasa et al. 2007; Potter et al. 2003; Rosenwax & McNamara 2006), the focus is on the proportion of separations with a diagnosis of cancer.

Overall, during 2008–09 in the five jurisdictions considered, 57% of palliative care separations had a principal diagnosis of cancer. This proportion varied according to the coding pattern, with 45% of separations with only a diagnosis code of *Palliative care* having a principal diagnosis of cancer compared with 72% of those with both a 'Care type' and a diagnosis code of *Palliative care* and 65% of those with only a 'Care type' of *Palliative care*.

The differences across the three patterns of assigning palliative care codes are still evident, albeit less stark, when both the principal and any additional diagnoses are considered. That is, 83% of palliative care separations with a 'Care type' and diagnosis code of *Palliative care* had a principal or additional diagnosis of cancer; correspondingly, 80% of those with only a 'Care type' of *Palliative care* did so, as did 71% of those with only a diagnosis code of *Palliative care*.

Procedures

Admitted patient separations can be grouped into one of three categories – *Surgical*, *Medical*, and *Other*. These categories are based on the absence or presence of procedures typically carried out within operating rooms or elsewhere as follows:

- *Surgical* – involved at least one operating room procedure
- *Medical* – did not involve either an operating room procedure or a 'significant' non-operating room procedure

- *Other* – involved a least one non-operating room procedure (such as an endoscopy) that is considered ‘significant’ (DoHA 2006).

These categories (and the procedures considered to be ‘significant’) are based on the Australian Refined Diagnosis Related Group (AR-DRG) classification (see AIHW 2010a for further information about this classification).

As shown in Table 4.3, the overall proportion of palliative care separations that involved a surgical procedure in 2008–09 among the nominated five jurisdictions was 6%. Those palliative care separations with only a diagnosis code of *Palliative care* had a higher proportion (11%) of separations that had involved a surgical procedure than did those separations that had both a ‘Care type’ and diagnosis code of *Palliative care* (1%).

Separation mode

Information is collected in the NHMD on the ‘mode of completing a separation’. This describes the status of the patient at the end of the separation in terms of whether they died and, for those that did not die, their destination after they were discharged from hospital. Just under half (47%) of the palliative care separations in 2008–09 in the five jurisdictions ended with the death of the patient. This form of completing a separation was more frequently observed among those palliative care separations that had been assigned both a ‘Care type’ and a diagnosis code of *Palliative care* (59%) than those that had only a diagnosis code of *Palliative care* (39%).

Summary

In summary, the data clearly indicate inherent differences by state and territory in the way in which separations that involved the provision of palliative care are coded. Beyond this, some other differences were also evident for the five jurisdictions for which there was no one-to-one correspondence between the coding of *Palliative care* for ‘Care type’ and diagnosis. However, these differences do not provide evidence of a systematic approach to coding certain separations that involved palliative care in one way versus another, as was seen when state and territory data were considered.

Furthermore, it could be expected, based on the coding rules, that those palliative care separations with only a diagnosis code of *Palliative care* would involve substantially more days of hospitalisation, on average, than those with either only a ‘Care type’ of *Palliative care* or both a ‘Care type’ and a diagnosis code of *Palliative care*. This was not the case; the data suggest little difference in the average length of hospitalisation according to the pattern of assigning palliative care codes.

5 Recommended approach

The objective of this paper was to determine the best approach to identify admitted patient separations in Australian hospitals for which palliation was a substantial component of the care provided. The customary approach of identifying palliative care separations relies on the use of 'Care type' information. In this paper, two other approaches to identify such separations were proposed.

An examination of the relevant coding standards and specifications, as well as an analysis of data from the NHMD for 1999–00 to 2008–09, leads to the conclusion that option 3 provides the most appropriate method of identifying separations in Australian admitted patient settings that involved a substantial component of palliative care. Option 3 utilises information from both the 'Care type' and diagnosis data items such that if either is coded as *Palliative care*, then the separation is considered to be a palliative care separation. The reasons for this conclusion are as follows:

1. **The intent of both data items matches the objective of this paper.** According to the coding standards and data collection specifications, both the 'Care type' and the diagnosis data items identify separations that match the topic of interest. That is, both can be used to identify separations for which palliation was a substantial component of the care provided. Thus, by definition, both of these data items are relevant.
2. **Comparability issues are reduced.** There is variation among and within jurisdictions in the assignment of care type and in the use of statistical discharges. As a result, the comparability of 'Care type' data may be affected. Such variation was illustrated in this paper. In three jurisdictions, there was virtually a one-to-one correspondence between the recording of *Palliative care* as the 'Care type' and as a diagnosis in 2008–09. In contrast, in the other five jurisdictions, many separations had a diagnosis code of *Palliative care* without a corresponding 'Care type' code. The issue of the lack of comparability of data across jurisdictions due to the use of different coding practices is reduced by identifying palliative care separations in admitted patient data using both diagnosis and 'Care type' information.
3. **Relying only on diagnosis information is insufficient.** Analyses of NHMD data indicated that for some separations, 'Care type' was coded as *Palliative care* but there was no corresponding diagnosis code. Thus, it is insufficient to only use diagnosis information to identify palliative care separations; doing so would lead to the exclusion of a number of separations that clearly involved a substantial provision of palliative care.
4. **No systematic differences in the type of separations coded in one way versus another.** With the exception of differences by jurisdiction in the method used to code palliative care separations, analyses of the NHMD did not indicate any other apparent systematic differences in the types of palliative care separations coded in one way versus another.

In conclusion, when the aim is to identify admitted patient separations for which palliation was a substantial component of the care, the most appropriate approach is to include all those separations for which *Palliative care* was coded as the 'Care type' and/or a diagnosis.

The use of this approach was discussed and subsequently endorsed by the national Palliative Care Working Group (formerly the Palliative Care Intergovernmental Forum) at its March 2011 meeting. Furthermore, this approach will be used in further work by the AIHW when the aim is to capture those admitted patient separations for which palliative care was a substantial component of the care provided.

Appendix A: Data source

National Hospital Morbidity Database

Data from the National Hospital Morbidity Database (NHMD) are used in this paper. These data pertain to admitted patients in public and private hospitals in Australia. Data on separations that took place in hospices affiliated with hospitals are included.

The NHMD includes administrative data, demographic information on patients, and clinical information including diagnoses and procedures performed. This annual collection is compiled and maintained by the AIHW using data supplied by state and territory health authorities. Information from almost all hospitals in Australia is included in the database: public acute and public psychiatric hospitals, private acute and psychiatric hospitals, and private free-standing day hospital facilities.

Since each record within the NHMD is based on an episode of admitted patient care, the separation count is a count of episodes, not persons.

At the time that the analyses were completed for this paper, the NHMD contained data from 1993–94 to 2008–09. In 1998–99, hospitals across Australia began to implement a change in the classification system used to code the diagnosis for hospitalisations (i.e. from ICD-9-AM to ICD-10-AM). The first full year for which national data were available using ICD-10-AM is 1999–00.

For each of the years covered in this paper, the coverage of the NHMD has been essentially complete. For example, for 2008–09, all public hospitals were included except for a small mothercraft hospital in the ACT, while private hospital data were not provided for private free-standing day facilities in the ACT and the NT, and for one private free-standing day facility in Tasmania. For details on coverage of previous NHMD collections, see the annual *Australian Hospital Statistics* reports (e.g., AIHW 2009).

Comprehensive hospital statistics from the NHMD are released by the AIHW on an annual basis (e.g. AIHW 2009, 2010a). Further information about this data source is available in those reports.

Standard data exclusions

As per the standard practice when analysing admitted patient data in the NHMD, the data presented in this paper exclude those records for which the 'Care type' data item was reported as *Newborn (unqualified days only)*, *Hospital boarder* or *Posthumous organ procurement*.

Appendix B: ‘Care type’ data item

Details about the three data collection specifications that applied to the ‘Care type’ data item, as included in the NHMD, for 1999–00 to 2008–09 are shown in Table B.1. Further information about this data item, including a guide for its use, can be found in the *National health data dictionary* (AIHW 2010b). The information shaded in grey pertains specifically to palliative care.

Table B.1: Applicable collection specifications for the ‘Care type’ data item in the National Hospital Morbidity Database, 1999–00 to 2008–09

	1999–00	2000–01 to 2002–03	2003–04 to 2008–09
Name of data item	Type of episode of care	Care type	Hospital service—care type
Identification number	Knowledgebase ID 000168 version 3	Knowledgebase ID 000168 version 4	METeOR identifier 270174
Code set	1.0 Acute care	1.0 Acute care	1.0 Acute care
	2.0 Rehabilitation care	2.0 Rehabilitation care	2.0 Rehabilitation care
	2.1 Rehabilitation care delivered in a designated unit	2.1 Rehabilitation care delivered in a designated unit (optional)	2.1 Rehabilitation care delivered in a designated unit (optional)
	2.2 Rehabilitation care delivered according to a designated program	2.2 Rehabilitation care delivered according to a designated program (optional)	2.2 Rehabilitation care delivered according to a designated program (optional)
	2.3 Rehabilitation care, being principal clinical intent	2.3 Rehabilitation care, being principal clinical intent (optional)	2.3 Rehabilitation care, being principal clinical intent (optional)
	3.0 Palliative care	3.0 Palliative care	3.0 Palliative care
	3.1 Palliative care delivered in a designated unit	3.1 Palliative care delivered in a designated unit (optional)	3.1 Palliative care delivered in a designated unit (optional)
	3.2 Palliative care delivered according to a designated program	3.2 Palliative care delivered according to a designated program (optional)	3.2 Palliative care delivered according to a designated program (optional)
	3.3 Palliative care, being principal clinical intent	3.3 Palliative care, being principal clinical intent (optional)	3.3 Palliative care, being principal clinical intent (optional)
	4.0 Non-acute care	4.0 Geriatric evaluation and management	4.0 Geriatric evaluation and management
		5.0 Psychogeriatric care	5.0 Psychogeriatric care
	5.0 Unqualified neonate	6.0 Maintenance care	6.0 Maintenance care
	5.1 Newborn—qualified days only	7.1 Newborn—qualified days only	7.1 Newborn—qualified days only
	5.2 Newborn—qualified and unqualified days	7.2 Newborn—qualified and unqualified days	7.2 Newborn—qualified and unqualified days
	5.3 Newborn—unqualified days only	7.3 Newborn—unqualified days only	7.3 Newborn—unqualified days only
	6.0 Other care	8.0 Other admitted patient care	8.0 Other admitted patient care
		9.0 Organ procurement—posthumous	9.0 Organ procurement—posthumous
	7.0 Boarders	10.0 Hospital boarder	10.0 Hospital boarder
	9.0 Unknown/not stated	11.0 Unknown/not reported	99.0 Unknown/not reported

Source: AIHW 2010d.

Appendix C: Palliative care coding standard

STANDARD '0224': PALLIATIVE CARE

Definition

Palliative care is care in which the clinical intent or treatment goal is primarily quality of life for a patient with an active, progressive disease with little or no prospect of cure. It is usually evidenced by an interdisciplinary assessment and/or management of the physical, psychological, emotional and spiritual needs of the patient; and a grief and bereavement support service for the patient and their carers/family. It includes care provided:

- in a palliative care unit, or
- in a designated palliative care program, or
- under the principal clinical management of a palliative care physician or, in the opinion of the treating doctor, when the principal clinical intent of care is palliation.

(Health Data Standards Committee (2006), *National Health Data Dictionary*, Version 13, AIHW)

The **services** provided by palliative care specialists include:

- clinical consultancy/care
- personal care
- spiritual/emotional support/counselling
- home care/support
- education
- case management/care coordination.

Classification

Z51.5 *Palliative care* should **never** be assigned as the principal diagnosis. A principal diagnosis code should be assigned which reflects the diagnosis resulting in the relatively shortened prognosis.

Z51.5 *Palliative care* should be assigned (as an **additional diagnosis** code) when the intent of care at admission is 'for palliation', or if at any time during the admission the intent of care becomes 'for palliation', and the care provided to the patient meets the definition above.

Interventions should be coded as appropriate.

EXAMPLE 1:

Patient in the final stages of COAD is admitted for palliative care.

Principal diagnosis: J44.9 *Chronic obstructive pulmonary disease, unspecified*
Additional diagnosis: Z51.5 *Palliative care*

EXAMPLE 2:

Patient with a history of adenocarcinoma of the breast (mastectomy five years ago) was admitted for management of brain metastases. On day 5 her care was transferred to the palliative care team.

Principal diagnosis: C79.3 *Secondary malignant neoplasm of brain and cerebral meninges*
Additional diagnosis: M8140/6 *Adenocarcinoma, metastatic NOS*
 C50.9 *Breast, unspecified*
 M8140/3 *Adenocarcinoma NOS*
 Z51.5 *Palliative care*

Source: NCCH 2008, pp.78–9.

Appendix D: Diagnosis code of palliative care

Table D.1: Separations for which a diagnosis code was *Palliative care* according to whether the code was assigned as a principal or additional diagnosis, all hospitals, 1999–00 to 2008–09

	Principal diagnosis		Additional diagnosis		Total with diagnosis of <i>Palliative care</i>	
	Per cent	Number	Per cent	Number	Per cent	Number
1999–00	3.0	763	97.0	25,032	100.0	25,795
2000–01	1.5	478	98.5	30,453	100.0	30,931
2001–02	0.9	280	99.1	31,558	100.0	31,838
2002–03	0.2	51	99.8	33,440	100.0	33,491
2003–04	0.1	25	99.9	36,986	100.0	37,011
2004–05	0.0	19	100.0	41,159	100.0	41,178
2005–06	0.1	53	99.9	43,300	100.0	43,353
2006–07	0.1	24	99.9	45,299	100.0	45,323
2007–08	0.0	9	100.0	47,103	100.0	47,112
2008–09	0.0	1	100.0	50,994	100.0	50,995

Source: National Hospital Morbidity Database, AIHW.

Appendix E: Number of palliative care separations

Table E.1: Palliative care separations as identified by 'Care type' and diagnosis information, all hospitals, 1999-00 to 2008-09

Type of separation	Number of separations									
	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Palliative care recorded as 'Care type' and:										
<i>Palliative care</i> recorded as a diagnosis code	13,613	17,258	18,729	19,910	21,535	23,682	23,960	26,124	25,845	28,191
<i>Palliative care</i> not recorded as a diagnosis code	7,723	6,026	4,802	4,502	3,402	1,434	1,744	2,127	1,468	1,347
No diagnosis codes reported	5	23	27	3	22	10	37	22	51	5
<i>Sub-total</i>	21,341	23,307	23,558	24,415	24,959	25,126	25,741	28,273	27,364	29,543
Palliative care not recorded as 'Care type' and:										
<i>Palliative care</i> recorded as a diagnosis code	12,168	13,629	13,032	13,497	15,455	17,496	19,355	19,198	21,266	22,804
<i>Palliative care</i> not recorded as a diagnosis code	5,839,176	6,084,316	6,315,938	6,570,277	6,783,869	6,973,819	7,255,407	7,549,219	7,821,772	8,092,291
No diagnosis codes reported	5,082	2,950	13,319	2,843	4,072	2,256	2,610	6,174	3,532	3,715
<i>Sub-total</i>	5,856,426	6,100,895	6,342,289	6,586,617	6,803,396	6,993,571	7,277,372	7,574,591	7,846,570	8,118,810
'Care type' not reported and:										
<i>Palliative care</i> recorded as a diagnosis code	14	44	77	84	21	0	38	1	1	0
<i>Palliative care</i> not recorded as a diagnosis code	21,002	29,499	32,210	33,854	12,846	150	8,829	47	10	95
No diagnosis codes reported	21	24	37	14	3	3	3	5	0	0
<i>Sub-total</i>	21,037	29,567	32,324	33,952	12,870	153	8,870	53	11	95
Total number of separations	5,898,804	6,153,769	6,398,171	6,644,984	6,841,225	7,018,850	7,311,983	7,602,917	7,873,945	8,148,448

Source: National Hospital Morbidity Database, AIHW.

Appendix F: Public hospital peer groups

The categories of the public hospital peer group classification, as used in this report, are described in Table F.1. Owing to the small number of palliative care separations in 'Specialist women's and children's hospitals' and 'Psychiatric hospitals', these two groups were grouped with 'Unpeered and other hospitals' for the purposes of this paper. For further information about public hospital peer groups, see *Australian hospital statistics* (AIHW 2010a).

Table F.1: Description of public hospital peer groups

Hospital type / peer group	Description
Principal referral hospitals	Major city hospitals with >20,000 acute weighted separations and Regional hospitals with >16,000 acute weighted separations per annum
Large hospitals	Includes: <ul style="list-style-type: none"> Major city acute hospitals treating more than 10,000 acute weighted separations per annum Regional acute hospitals treating >8,000 acute weighted separations per annum, and remote hospitals with >5,000 weighted separations
Medium hospitals	Includes: <ul style="list-style-type: none"> Medium acute hospitals in Regional and Major city areas treating between 5,000 and 10,000 acute weighted separations per annum Medium acute hospitals in Regional and Major city areas treating between 2,000 and 5,000 acute weighted separations per annum, and acute hospitals treating <2,000 weighted separations per annum but with >2,000 separations per annum
Small acute hospitals	Includes: <ul style="list-style-type: none"> Small Regional acute hospitals (mainly small country town hospitals), acute hospitals treating <2,000 separations per annum, and with less than 40% non-acute and outlier patient days of total patient days Small remote hospitals (<5,000 acute weighted separations but not 'Multi-purpose services' and not 'Small non-acute'). Most are <2,000 separations
Sub-acute and non-acute hospitals	Includes: <ul style="list-style-type: none"> Small non-acute hospitals, treating <2,000 separations per annum, and with more than 40% non-acute and outlier patient days of total patient days Multi-purpose services Hospices Rehabilitation Mothercraft Other non-acute (for example, geriatric treatment centres combining rehabilitation and palliative care with a small number of acute patients)
Other	Includes: <ul style="list-style-type: none"> Specialist acute women's and children's hospitals with >10,000 acute weighted separations per annum Psychiatric hospitals Unpeered and other hospitals

Source: AIHW 2005.

Glossary

This section provides a general description of the terms used in this paper. The terms have been defined in the context of this paper; some terms may have other meanings in other contexts. Where applicable, the identification number from the Metadata Online Registry (METeOR) is shown after the definition of the term. METeOR is Australia's central repository for health, community services and housing assistance metadata. METeOR can be viewed on the AIHW website at <www.aihw.gov.au>.

Additional diagnosis: a condition or complaint either coexisting with the principal diagnosis or arising during the episode of care. (METeOR identifier 333832)

Administrative database: observations about events that are routinely recorded or required by law to be recorded. Such events include births, deaths, hospital separations and cancer incidence. The National Hospital Morbidity Database is an example of an administrative database.

Admitted patient: a person who undergoes a hospital's formal admission process to receive treatment and/or care. Such treatment or care is provided over a period of time and can occur in hospital and/or in the person's home (as a 'hospital-in-home' patient). (METeOR identifier 268957)

Average length of stay: the average number of patient days for admitted patient episodes. Patients admitted and separated on the same day are allocated a length of stay of 1 day.

Care type: the overall nature of a clinical service provided to an admitted patient during an episode of care. (METeOR identifier 270174)

Episode of care: The period of admitted patient care between a formal or statistical admission and a formal or statistical discharge, characterised by only one care type. (Also see *Care type, Separation* and *Statistical discharge*.)

Hospital: a health-care facility established under Commonwealth, state or territory legislation as a hospital or a free-standing day procedure unit and authorised to provide treatment and/or care to patients. (METeOR identifier: 268971)

International Statistical Classification of Diseases and Related Health Problems (ICD): the World Health Organization's internationally accepted classification of diseases and related health conditions. The tenth revision of the Australian Modification of ICD (namely, ICD-10-AM) has been used in all Australian jurisdictions for the coding of admitted patient data since 1999-00.

Length of stay: the length of stay of an overnight patient is calculated by subtracting the date the patient is admitted from the date of separation and deducting days the patient was on leave. A same-day patient is allocated a length of stay of 1 day. (METeOR identifier: 269982)

Mode of separation: the status at separation of person (discharge/transfer/death) and place to which person is released (where applicable). (METeOR identifier: 270094)

Overnight-stay patient: a patient who, following a clinical decision, receives hospital treatment for a minimum of 1 night (that is, who is admitted to and separated from the hospital on different dates).

Palliative care: care in which the clinical intent or treatment goal is primarily quality of life for a patient with an active, progressive disease with little or no prospect of cure. It is usually evidenced by an interdisciplinary assessment and/or management of the physical, psychological, emotional and spiritual needs of the patient; and a grief and bereavement support service for the patient and their carers/family. (Also see *Care type*.)

Principal diagnosis: the diagnosis established after study to be chiefly responsible for occasioning an episode of admitted patient care. (METeOR identifier 333838)

Private hospital: a privately owned and operated institution, catering for patients who are treated by a doctor of their own choice. Patients are charged fees for accommodation and other services provided by the hospital and relevant medical and paramedical practitioners. Acute care and psychiatric hospitals are included, as are private free-standing day hospital facilities.

Procedure: a clinical intervention that is surgical in nature, carries a procedural risk, carries an anaesthetic risk, requires specialised training and/or requires special facilities or equipment available only in the acute care setting. (METeOR identifier: 361687)

Public hospital: a hospital controlled by a state or territory health authority. Public hospitals offer free diagnostic services, treatment, care and accommodation to all eligible patients.

Same-day: an admitted patient who is admitted and separates on the same date. Such patients are allocated a length of stay of 1 day.

Separation: an episode of care for an admitted patient which may include a total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute care to palliative care). 'Separation' can also refer to the process by which an admitted patient completes an episode of care such as by being discharged, dying, transferring to another hospital or changing type of care.

Statistical discharge: an administrative process that completes an admitted patient episode of care when there is a change in the clinical intent of treatment (for example, from acute care to palliative care). For each statistical discharge, there should be a corresponding statistical admission – that is, a new episode of care with a different care type is created. (Also see *Care type*, *Episode of care* and *Separation*.)

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