



COMMONWEALTH GRANTS COMMISSION

DRAFT ASSESSMENT PAPER CGC 2003/28

INPATIENT SERVICES ASSESSMENT

Prepared for the Commission's 2003 Conferences on Draft Assessments

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NOTE

Included in this paper are the results of preliminary calculations based on the methods proposed throughout the paper and using the data currently available. Those results are indicative only and should be seen as work in progress. Ongoing changes are being made to standards and factor calculations as new data come to hand. Moreover, the calculations have been done using a prototype assessment system and are subject to ongoing revision as checking processes proceed.

In this version of the paper State-specific expense data, and data referring to State-specific patient numbers have been removed for confidentiality reasons.

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for access to their inpatient and hospital establishment data. The data are provided to the Commission via the National Hospital Morbidity Dataset and the National Public Hospital Establishment Dataset which are collated and produced by the Australian Institute of Health and Welfare.

SUMMARY OF PROPOSED CHANGES

1. States were relatively satisfied with the approach taken in the 1999 Review. In general, comments related more to the use and unit cost influences that should be taken into account and their size rather than the conceptual methods to be used — aspects of the acute inpatients, hospital costs factor are the main exception.

2. The changes that are proposed for the 2004 Review Inpatient Services assessment include:

- (i) the inclusion of expenses for inpatients in designated psychiatric wards and inpatients in psychiatric institutions in the non-acute inpatients component;
- (ii) the inclusion of a CALD weight, and the inclusion of cost weighted use rates for people from non-English speaking countries in the acute and non-acute socio-demographic composition factors — however, the data required to derive use rates were not available in time to be included in the calculations in this paper;
- (iii) the low income weights will be updated in both the acute and non-acute socio-demographic composition factors;
- (iv) the private patient discount will change from 12 per cent to 9 per cent;
- (v) ARIA+ classifications will be used to measure region instead of the Rural, Remote, Metropolitan Areas (RRMA) classification;— Discussion Paper, *2003/63 Dispersion*, outlines the issues involved in changing to the ARIA+ classifications;
- (vi) the Indigenous cost weights will only be discounted by 50 per cent for Indigenous separations that are below a third or over three times the average length of stay for their Diagnostic Related Group (DRG); and
- (vii) the HIV/AIDS and drugs adjustment for New South Wales and the renal dialysis adjustment for the Northern Territory will not be continued.

The National Public Hospital Morbidity Data (used to calculate the socio-demographic composition factors) and National Public Hospital Establishment Data (used to calculate the hospital costs factor) that includes ARIA+ coding were not available in time to be included in the preliminary calculation results. Therefore, the preliminary calculations will use the 2003 Update factors for the acute and non-acute inpatient socio-demographic composition factors and the hospital costs factor.

INTRODUCTION

1. This paper presents the draft assessment for the Inpatient Services category for the 2004 Review. It builds on the staff proposals set out in *Discussion Paper 2002/29 - Inpatient Services*¹ and State comments on them provided at the 2002 Conferences, the rejoinder submissions, and bi-lateral discussions.

1999 REVIEW

2. **Category scope.** In the 1999 Review, the category included expenses on acute medical care and treatment. Acute care hospitals were defined as establishments that provided at least minimal medical, surgical or obstetric services for inpatient treatment and/or care, and which provided continuous comprehensive qualified nursing services as well as other necessary professional services². It included expenses on equipment and supplies, staff accommodation and amenities. More specifically, the category included expenses on:

- (i) all admitted patient services including nursing home type patients in acute care institutions;
- (ii) emergency transport to hospital;
- (iii) inter-hospital transport;
- (iv) non-emergency transport to and from treatment centres;
- (v) travel and accommodation assistance;
- (vi) research into health, medical and health sciences undertaken in acute care institutions; and
- (vii) medical instrumentation undertaken in acute care institutions.

3. Table 1 shows the gross standard expenses for six years. In 2001-02, the Hospitals category represented 13.39 per cent of total gross standard expenses.

¹ In the 1999 Review, this category was called Hospital Services.

² Australian Institute of Health and Welfare, *National Health Data Dictionary, Version 9, 2000*, Canberra, ACT.

Table 1 HOSPITALS — GROSS STANDARD EXPENSES, 2003 UPDATE

	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
\$pc	511.44	537.31	606.86	627.86	648.22	670.55
% of total gross standard expenses	13.90	13.92	13.33	13.55	13.35	13.39

4. Expenses relating to the Australian Health Care Agreement, Blood Transfusion Services and Magnetic Resonance Imaging specific purpose payments (SPPs) were included in the category. Expenses relating to other health SPPs were excluded because of the requirements of previous terms of reference, or because the Commission considered they related to an Australian Government responsibility or judged that their allocation reflected needs. They included Fringe Benefit Tax Transitional grants, Health Programme grants, payments for the Highly Specialised Drugs, the National Health Development Fund, Repatriation General Hospital grants and Health Care grants.

5. *Assessment structure.* Table 2 shows the 1999 Review Hospitals category assessment.

6. Compared with an equal per capita assessment, the 2003 Update Hospitals assessment redistributed about \$212.4 million away from New South Wales, Victoria, Queensland and the ACT to Western Australia, South Australia, Tasmania and the Northern Territory.

Table 2 HOSPITAL SERVICES EXPENDITURE ASSESSMENT STRUCTURE, 1999 REVIEW

Expenditure component	Expenditure component weight	Disability factors	Basis of calculation
	%		
Scale-affected expenditure	0.64	Input costs	General method with weights of 80% for wages, 2% for accommodation and 1% for electricity.
		Administrative scale	General method.
Hospital acute inpatient services	89.76	Socio-demographic composition	Cost weighted utilisation rates by age, sex, Aboriginality, income, region and low English fluency derived from Hospital Morbidity Data and Census data.
		Hospital costs	Based on the average cost of treatment by region to account for dispersion, service delivery scale and research and case complexity.
		Input costs	General method with weights of 70% for wages, 2% for accommodation and 1% for electricity.
Hospital non-acute inpatient services	7.81	Socio-demographic composition	Bed day rates by age, sex, Aboriginality, income, region and low English fluency derived from Hospital Morbidity Data and Census data.
		Hospital costs	Based on the average cost of treatment by region to account for dispersion, service delivery scale and research and case complexity.
		Input costs	General method with weights of 70% for wages, 1% for accommodation and 3% for electricity.
Patient transport	1.50	Cost of patient transport	Based on the general dispersion method for air travel, inter-regional travel and local travel.
Isolation	0.29	Isolation	General method.

PROPOSED CATEGORY DEFINITION AND ASSESSMENT STRUCTURE FOR THE 2004 REVIEW

7. The main change proposed for this category is the inclusion of expenses for inpatients in designated psychiatric wards and inpatients in psychiatric institutions. This was outlined in the *Discussion Paper CGC 2001/12, Scope and Structure of the Standard Budget*. These services were previously included in a separate Mental Health category.

8. The Hospitals category is to be renamed Inpatient Services.

9. **Preliminary State views.** New South Wales, Victoria, Queensland, Tasmania and the Northern Territory supported the inclusion of mental health inpatient expenditure in the Inpatient Services category. The Northern Territory suggested a separate expenditure component for psychiatric institutions and designated psychiatric wards.

10. Western Australia suggested a merging of the health categories and more global assessment measures.

11. South Australia questioned whether the proposed disaggregation of the Mental Health category into the Inpatient Services and Non-Inpatient Services and Community Health categories would be feasible, because States did not consistently use that disaggregation.

12. **Staff proposals.** Staff proposed that mental health inpatient expenditure be combined with non-acute inpatient expenditure. Data are available from GFS to disaggregate mental health expenses into those for inpatients and non-inpatients. No change to the component structure of the category was proposed.

13. Staff noted that the issue of adopting more global expenditure assessments was discussed in *Discussion Paper CGC2002/3, Scope and Structure of the Equalisation Budget*. In brief, that paper noted that the consensus of the Commission and Heads of Treasury at the Priority Issues Conference in 2001 was not to adopt aggregated expenditure assessments.

14. **Further State views.** The Northern Territory questioned whether it was appropriate to include expenditure on mental health inpatients in the non-acute inpatient component rather than assessing it in a separate component. It noted that the nature, use and cost per episode of mental health services could differ from those of non-acute hospital services and cited the Australian Institute of Health and Welfare as indicating that the average length of stay, patient days and separations for mental health diseases tended to be higher than many other diagnostic categories.

15. **Analysis.** The Commission considers that needs for mental health inpatients can be calculated using the methods currently used in the non-acute inpatients component. This is due to the following.

- (i) The socio-demographic composition disability variables used to assess costs and use in the non-acute inpatient component are also relevant to the mental health inpatient population.
- (ii) As a standard policy, States fund inpatient mental health episodes on a per bed day basis. The same approach is used for non-acute general inpatients.
- (iii) In the non-acute inpatients component, bed days are used to calculate use rates. Therefore, if mental health patients have, on average, different lengths of stay from general non-acute inpatients, this will be taken into account in the assessment.

16. Therefore, expenses for mental health inpatients can be amalgamated with the non-acute inpatient population and assessed together. In any case, if the mental health inpatients were assessed separately, the same method as is used for the non-acute inpatients would be applied.

17. **Commission decision.** The Commission proposes to adopt the category definition outlined in *Discussion Paper CGC 2001/12, Scope and Structure of the Standard Budget*. In brief, the paper proposed that the Inpatient Services category would cover costs of acute and non-acute inpatients, including those in psychiatric institutions and designated psychiatric wards of hospitals. It will also cover costs of patient transport.

18. For the reasons outlined above, the Commission has decided not to assess inpatient mental health expenditure as a separate component.

19. The Commission's decisions concerning the 2004 Review Inpatient Services assessment are summarised in Table 3. The proposed treatment of SPPs from the Australian Government relating to this category is also listed in Table 3.

Table 3 COMMISSION DECISIONS – CATEGORY DEFINITION, ASSESSMENT STRUCTURE AND COMPONENT WEIGHTS

Decision	Reason
Category definition. Same, except that psychiatric/mental health inpatient expenses will be included in the non-acute inpatients component.	The psychiatric/mental health inpatient expenses can be assessed in the same way as expenses in the non-acute inpatient component.
<p>Discussion Paper CGC 2003/2 <i>Treatment of Commonwealth Revenue Payments</i> proposed treating the health SPPs in the following ways:</p> <ul style="list-style-type: none"> • Blood Transfusion Services – Inclusion • Magnetic Resonance Imaging – Inclusion • Youth Health Services – Inclusion • National Public Health - Inclusion • Australia Health Care Grants – Pool • Fringe Benefit Tax transitional grants for public and not-for-profit – Exclusion • Health Program Grants – Exclusion • Highly Specialised Drugs – Exclusion • Essential Vaccines - Exclusion • University Departments of Rural Health – Exclusion • National Youth Suicide - Exclusion • National Health Development Fund – Exclusion • Repatriation General Hospital – Exclusion • Health Care Grants, quarantined amounts - Exclusion 	<p>The expenditure of funds received through SPPs treated by inclusion or as part of the pool is included in the standard and needs are assessed.</p> <p>SPPs treated by exclusion were quarantined by previous terms of reference, judged to be a Australian Government responsibility (with the States acting as Australian Government agents) or to be a minor payment where the introduction of additional factors in the assessment would not be warranted.</p>
<p>Components and weights:</p> <ul style="list-style-type: none"> • Acute Inpatients: 84.71% • Non-acute and mental health inpatients: 13.23% • Cost of Patient Transport: 1.49% • Fixed Costs: 0.44% • Isolation: 0.12% 	<p>The Commission maintained the same component structure as used in the 1999 Review. This is because it still reflects the standard policies used for costing inpatients. Component weights were determined from national average cost data for acute, non-acute and mental health inpatients. The cost of patient transport component weight was determined from national average cost of data from State data returns and from cost of patient transport data from the 2000-01 Australian Hospital Statistics report, Australian Institute of Health and Welfare (2002).</p>

2004 REVIEW ASSESSMENT

FIXED COST COMPONENT

20. There are two factors assessed in the fixed costs expenditure component of the Inpatient Services category. They are administrative scale and input costs.

ADMINISTRATIVE SCALE

21. **1999 Review.** The administrative scale factor was assessed to account for differences in per capita costs of providing central office functions and whole of State services. Scale-affected expenses for this category were assessed as \$7.4 million, of which \$5.4 million was considered as fixed cost and \$2.0 million as variable cost. The scale-affected expenses component represented 0.64 per cent of expenses in this category.

22. **Preliminary State views.** Tasmania suggested that the scale disability should also apply to hospital administration, and argued that the scale-affected expenditure for health and welfare was understated. The ACT asked that the component weight be increased to reflect the higher administrative scale costs it faced.

23. **Staff proposals.** Discussion Paper, CGC 2002/23, The Administrative Scale Factor, examined the issues relating to the administrative scale factor.

24. In relation to Tasmania's suggestion, Commission staff were reluctant to recommend that the concept of fixed cost be expanded beyond head office expenses and State-wide services. The notion of fixed cost could be generalised to every service States provide. The extent of costs incurred in hospitals could be affected by State policies on the design of the hospital system and by where people live.

25. The issues raised by Tasmania and the ACT were more closely related to service delivery scale than the minimum fixed costs of head offices as captured in the administrative scale factor. Staff were not convinced that the higher costs mentioned by the ACT were mostly disability related, or were not already captured. The hospital costs factor captured higher costs associated with large metropolitan hospitals and small hospitals.

26. **Further State views.** No further State views were received in relation to administrative scale issues specific to this category

27. **2004 Review.** Draft Assessment Paper 2003/60 *Administrative Scale* discusses the issues raised by the States regarding the assessment of this factor. The paper sets out the Commission's decisions on the general method of assessment adopted for the 2004 Review and on the size of the fixed cost component in each category. The States did not raise issues specific to this category.

28.The Commission has decided that administrative scale will be assessed for this category to recognise the unavoidable costs each State would incur to have the policy and administrative infrastructure necessary to provide the service regardless of the size of the task.

29.The administrative scale factors for this category, shown in Table 4, have been calculated using the 2004 Review general method. Fixed costs for this category have been estimated to be \$8.16 million per State. Total fixed costs for the category are \$65.28 million which represents 0.50 per cent of the category standard.

30.The Commission also assessed extra fixed costs of \$0.69 million for the Northern Territory to recognise the extra costs it incurs through the dual policy development tasks it must perform because of the high proportion of Indigenous people in its population.

Table 4 ADMINISTRATIVE SCALE FACTORS — FIXED COST COMPONENT

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 Update								
1997-98	0.52338	0.62037	0.75213	1.23280	1.44006	3.88868	5.81057	9.84421
1998-99	0.52338	0.62037	0.75213	1.23280	1.44006	3.88868	5.81057	9.84421
1999-2000	0.52338	0.62037	0.75213	1.23280	1.44006	3.88868	5.81057	9.84421
2000-01	0.52338	0.62037	0.75213	1.23280	1.44006	3.88868	5.81057	9.84421
2001-02	0.52338	0.62037	0.75213	1.23280	1.44006	3.88868	5.81057	9.84421
2004 Review								
1997-98	0.33982	0.46451	0.62720	1.18630	1.44578	4.54134	6.93619	19.05288
1998-99	0.33978	0.46510	0.62480	1.18104	1.45485	4.60512	6.96784	18.94507
1999-2000	0.33979	0.46540	0.62214	1.17863	1.46439	4.66324	6.98156	18.85992
2000-01	0.33971	0.46550	0.61921	1.17800	1.47650	4.72243	6.98609	18.83349
2001-02	0.34013	0.46524	0.61538	1.17754	1.48735	4.77358	7.00016	18.94453

31.The factor is based on the Estimated Resident Population. The factor and the component weight will be updated annually.

INPUT COSTS

32.**1999 Review.** The input costs factor was assessed to recognise differences between States in per capita costs of labour, office accommodation and electricity. A separate factor was calculated for each of those inputs. For the scale affected cost component, those factors were applied to the following proportions of standard expenses:

- wages and salaries 80 per cent;
- accommodation 2 per cent; and
- electricity 1 per cent.

33. **2004 Review.** *Discussion Paper CGC 2003/04 Input Costs* sets out the issues raised by the States regarding the assessment of wages and salaries costs. The paper sets out the Commission's proposals for the general method of assessment to be adopted for the 2004 Review. *Draft Assessment Paper CGC 2003/79 Input Costs - Electricity and Accommodation* sets out the issues raised by the States regarding the assessment of input costs relating to accommodation and electricity. The paper sets out the Commission's decisions on the general method of assessment to be adopted for the 2004 Review and on the size of the standard expense proportions in each category for accommodation costs and electricity costs. The States did not raise issues specific to this category.

34. The Commission considered that the prices of labour, accommodation and electricity used in providing inpatient services differ across States for reasons beyond the control of individual States. It has therefore decided that input costs will be assessed for this component.

35. The input costs factors for the fixed cost component of this category, shown in Table 5, have been calculated according to the 2004 Review general methods. The standard expense proportions applied were 80 per cent for wages and salaries, 2 per cent for accommodation and 1 per cent for electricity. These were estimates of the proportion each input represented of expenses in this component.

Table 5 INPUT COSTS FACTORS — FIXED COST EXPENSES COMPONENT

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 Update								
1997-98	1.01442	0.99641	0.97900	1.01118	0.98066	0.98883	1.02256	1.02219
1998-99	1.01536	0.99737	0.97848	1.00965	0.97853	0.98714	1.02184	1.01279
1999-2000	1.01602	0.99647	0.97931	1.01073	0.97830	0.98026	1.02136	1.00655
2000-01	1.01699	0.99780	0.97800	1.00933	0.97666	0.97808	1.02095	0.99739
2001-02	1.01952	1.00108	0.97332	1.00453	0.97429	0.97480	1.02073	0.99319
2004 Review								
1997-98	1.03086	0.98776	0.98243	0.98229	0.97405	0.93225	1.00817	1.11439
1998-99	1.03267	0.98876	0.98050	0.97883	0.97213	0.92981	1.01243	1.10979
1999-2000	1.03546	0.98791	0.97763	0.98082	0.96857	0.92317	1.01680	1.10513
2000-01	1.03603	0.98930	0.97573	0.98076	0.96738	0.92031	1.01603	1.10244
2001-02	1.03498	0.99044	0.97446	0.98186	0.97135	0.92001	1.01306	1.09897

36.The factors will be updated annually. The proportions represented by wages and salaries, accommodation and electricity will not be re-examined until the next Review.

ACUTE INPATIENTS COMPONENT

37.The acute inpatient services component included assessments for disability factors relating to:

- (i) socio-demographic composition;
- (ii) hospital costs; and
- (iii) input costs.

SOCIO-DEMOGRAPHIC COMPOSITION

38.In the 1999 Review, a socio-demographic composition factor was assessed, to reflect the use and unit cost influences of different population groups on the total cost of acute inpatient services.

39.The factor was based on Australian standard hospital use rates and Diagnosis Related Groups (DRG) cost weights for different population groups. Use rates measured standard use of inpatient services. DRG cost weights measured the relative cost of treating inpatients. Data on the use and cost of services by different population groups were derived from the National Hospital Morbidity Dataset. Data on the number of people in State populations were from the Census of Population and Housing.

40.Use rates and/or DRG cost weights were calculated for all acute inpatients grouped by:

- (i) age (use rates and cost per unit weights);
- (ii) sex (use rates and cost per unit weights);
- (iii) Indigeneity (use rates and cost per unit weights);
- (iv) low English fluency (cost per unit weight based on actual State expenses);
- (v) population location (use rates and cost per unit weights); and
- (vi) socio-economic status (use weights).

41. Three adjustments were made to the DRG cost weights. They were:

- (i) an outlier cost adjustment – to reflect the differential costs incurred due to varying lengths of stay in hospital;
- (ii) an Indigeneity cost adjustment – to reflect the extra costs of servicing Indigenous inpatients not picked up in the outlier adjustment; and
- (iii) a private patients cost adjustment – to reflect the lower costs of servicing private inpatients in public hospitals.

Age / Sex

42. **1999 Review.** The use and cost of inpatient services were found to be influenced by the age and sex composition of State populations. Therefore, age/sex cost-weighted use rates were applied to recognise this

43. **Staff proposals.** It was proposed that the same age/sex groups be retained for the 2004 Review. These were outlined in *Discussion Paper CGC2002/29, Inpatient Services*, paragraph 22.

44. **State views.** No States raised issues specific to the age/sex weights in their main or rejoinder submissions.

45. **Commission decision.** The Commission considers a case exists to retain the 1999 Review age/sex groups in calculating use weights for the 2004 Review.

Indigeneity

46. **1999 Review.** Indigenous cost-weighted use rates were applied to recognise that the use and cost of inpatient services were influenced by Indigeneity. The influences of Indigeneity recognised in the socio-demographic composition assessment were:

- (i) use of services, measured by use rates (use rates are measured by dividing the number of inpatients by the corresponding population);
- (ii) cost per unit, measured by DRG cost weights;
- (iii) under-recording of Indigenous inpatients;
- (iv) longer length of stay; and
- (v) higher cost of treatment not captured by length of stay.

Under-identification of Indigenous inpatients

47. **1999 Review.** An adjustment was made to compensate for the under-identification of Indigenous inpatients in the hospital morbidity data. The adjustment

was considered necessary because of the significant under-recording of Indigenous status in inpatient data.

48. The Indigenous under-identification adjustment was made using the estimates of under-identification from the report ‘*Expenditure on Health Services for Aboriginal and Torres Strait Islander People 1995-1996*’ (1998) by the Australian Institute of Health and Welfare (AIHW).

49. The Commission decided to progressively reduce the estimates of under-recording in each update in the expectation that States would improve their recording of Indigenous status.

50. **Preliminary State views.** The ACT asked that the Commission use the updated estimate of Indigenous under-identification reported in ‘*Expenditure on Health Services for Aboriginal and Torres Strait Islander People 1998-99*’ (2001) by the AIHW. It commented that the AIHW based the under-reporting figure for the ACT (44 per cent) on an ABS Report ‘*Assessing the Quality of Identification of Aboriginal and Torres Strait Islander People in Hospital Data*’ (1999).

51. **Staff proposals.** Table 6 shows the under-reporting percentages proposed for use in the 2004 Review Inpatient Services socio-demographic composition factor, acute and non-acute inpatient components in *Discussion Paper 2002/29*.

Table 6 UNDER-IDENTIFICATION PERCENTAGE OF INDIGENOUS INPATIENT POPULATIONS

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	%	%	%	%	%	%	%	%
1998 AIHW Report	33	20	30	0			0	0
2001 AIHW Report	30	25	20	6	10	19 ^(a)	44	0

Source: Expenditure on Health Services for Aboriginal and Torres Strait Islander People 1998-99, 2001, AIHW.

(a) An average of the States’ under-identification figures was applied to Tasmania.

52. **Preliminary State views.** No new issues were raised concerning the under-identification percentage of Indigenous inpatients in the rejoinder submissions.

53. **Commission decision.** The Commission decided to use the updated (2001) estimates of under-recording as shown in Table 6 and that an average of the other States’ figures from the 2001 report (19 per cent) be applied to Tasmania.

Cultural and Linguistic Diversity

54. **1999 Review.** A weight of 10 per cent was applied to all people with low English fluency, as determined via the Census, to recognise the extra costs incurred because of communication issues. The weight reflected the cost of providing interpreter services and additional medical staff time associated with more complex oral communications. Data on expenses for interpreter services were received from States and allowances for extra time

were based on judgment. This adjustment redistributed \$10.4 million towards New South Wales, Victoria and the Northern Territory.

55.Preliminary State views. Victoria stated that the low English fluency cost weight was too low, and only took into account the cost of translations. It presented evidence that delivering emergency services to people from non-English speaking backgrounds at Robinvale Health Service took four times as long because of language problems. At the Richmond Health Centre consultations were between two and eight times more expensive depending on whether a bilingual worker or interpreter was involved. It considered there were other costs associated with people from low English fluency backgrounds. These were:

- (i) people of non-English speaking background often entered the health system later and therefore increased the costs of treatment;
- (ii) re-admissions due to the poor post treatment action taken by many people with low English fluency; and
- (iii) provision of prayer rooms and other specific cultural facilities.

56.Victoria asked the Commission to increase the cost weight attributed to people with low English fluency due to the added cost of meeting divergent cultural needs and accommodating their higher and more costly use.

57.Tasmania suggested that the low-English fluency cost weight did not recognise economies of scale that could be achieved in delivering services to people with communication difficulties or cultural differences. It asked the Commission to introduce an additional weight for those States with a small number of people with low English fluency, or to discount the weight for States with a high number of people with low English fluency.

58.Staff proposals. Commission staff proposed to continue the low English fluency cost weight adjustment. As for the 1999 Review, the weight would be applied to all people with low English fluency, including Indigenous people. The low English fluency cost weight would be updated to reflect the current level of costs involved with providing those services. Information was sought from States concerning other costs associated with people from culturally and linguistically diversified backgrounds.

59.Further State views. The issues raised in the rejoinder submissions can be classed into four groups. These are:

- (i) the current method for assessing the low English fluency adjustment, and updating the weight;
- (ii) the introduction of a new weight to reflect costs other than those associated with low English fluency;
- (iii) the economies of scale in the provision of interpreter services; and
- (iv) other issues.

60. *Views on current method.* New South Wales supported the proposal to update the current low English fluency weight.

61. Both Queensland and Western Australia noted that information was available which stated people from non-English speaking backgrounds (NESB) had lower than average use rates of hospital services. They considered these lower use rates should be reflected in the socio-demographic composition factor.

62. Queensland also presented evidence to show that people from NESB used mainstream services in most cases and that limited extra expenses could be identified on special or access programs³.

63. South Australia supported the Commission's investigation into the appropriateness of the 10 per cent cost weight for low English fluency. It said that an additional 10 per cent weight for all inpatients with low English fluency considerably overstated the true impact of this patient group on the hospital system.

64. The Northern Territory suggested that the Commission's low English fluency weight may be too low. It said that, while the factor may account for the additional cost of interpreters, it was not able to comment on how adequately it accounted for the additional time staff spend in communicating with low English fluency patients. It suggested that the time required for staff consultation may be higher than the current factor allowed. This suggestion was based on information provided during the Victorian workplace discussions which indicated that consultation times can double when low fluency clients use Community Health services.

65. *Views on additional types of costs.* Overall, Victoria was in favour of introducing a new adjustment for these additional costs, while Queensland, South Australia, Tasmania and the Northern Territory said it was unnecessary.

66. Victoria stated that the Commission should reflect the cost impacts of cultural and social differences separate from low English fluency. It presented information on the growth in non-English speaking groups. However, it was not aware of any data that would enable a differential assessment of the costs associated with delivering services to these different groups. Victoria said it employed ethnic consultants and cultural health officers at hospitals and in health centres to ensure culturally appropriate services. However, it had no cost data or information on how readily they are used.

67. South Australia noted it had not had any requests for additional culturally specific services such as prayer rooms. However, if it did, the additional costs of providing these services would be marginal.

68. Tasmania urged the Commission to seek further substantiation of any additional cost arguments from the larger States prior to the consideration of any widening of the current disability for cultural and linguistically diverse groups (CALD). It stated that robust

³ Queensland Government, Department of Premier and Cabinet, Report to the Premier, Implementation of the Multicultural Queensland Policy 2001-2002, Dec 2002.

empirical evidence should be required to support, somewhat ambit arguments, being made by a number of States in relation to CALD costs.

69. The Northern Territory stated that the expansion of the factor to take into account other costs should depend on the materiality of these costs, whether resources service only low fluency patients and whether the services reflect standard policy. It did not think it was appropriate to expand the factor to include services such as prayer rooms as the standard policy would be to provide non-denominational prayer rooms and the likely cost to the hospital budget would be small.

70. **Views on economies of scale.** Victoria, Queensland and the Northern Territory were not in favour of introducing a low English fluency economies of scale adjustment. Tasmania encouraged the introduction of such an adjustment.

71. Victoria suggested there should be no adjustment for the size of NESB groups in the socio-demographic composition factor. It stated it has not been able to identify any evidence of economies of scale cost savings realised from the presence of larger ethnic groups and challenged other States to empirically support such arguments.

72. Queensland did not consider that any further disabilities for diseconomies of scale were required. It stated that any further scale disabilities would require a large amount of judgement and it was questionable whether the outcome would be material.

73. South Australia stated there may be some merit in Tasmania's argument. However, it was not in a position to provide any data of its own.

74. The Northern Territory did not support an adjustment for economies of scale for the low English fluency weight. It said that it would be difficult to gather comparative data on servicing large versus small ethnic groups. In addition, since most States would experience diseconomies of scale for at least some ethnic groups, the relative differences between States was not apparent.

75. Tasmania said that States with large numbers of ethnic groups can achieve significant economies of scale. It argued that the weight applied to relevant ethnic groups should vary between the States depending on the size of the communities.

76. **Views on other issues.** The Northern Territory stated that it provided additional linguistic and culturally appropriate services to Indigenous people in the form of Aboriginal Liaison Officers and Aboriginal Health Workers. These workers helped Indigenous patients on their arrival and during their stay in hospital. It said that these services improved the outcomes for Indigenous people regardless of their level of English fluency. It asked the Commission to account for these services in the Indigenous cost weights.

77. **Analysis - Views on current method.** In respect of lower use rates of inpatient services by people from non-English speaking backgrounds, two major sources of information were investigated:

- (i) the ABS National Health Survey; and
- (ii) the National Hospital Inpatient Data.

78.The 1989-90 National Health Survey showed a use rate for public hospitals about 7 per cent less by people who did not speak English at home. This calculation was not repeated with the 1994-95 National Health Survey data because the data did not differentiate between public and private hospitals. The 1995-96 National Hospital Inpatient Data showed about 3 per cent lower use by people from non-English speaking countries. Similar findings were reported in a more recent publication⁴.

79.Further analysis will be required to derive an estimate of the overall effect on State inpatient costs of low English fluency and use rates by people from non-English speaking countries. However, as there is evidence that the use of interpreter services increases costs, and there is also evidence that people from non-English speaking countries use inpatient services less, we propose to include both the low English fluency weight and incorporate differential use rates for people from non-English speaking countries in the 2004 Review Inpatient Services assessment

80.In the 1999 Review, the low English fluency weight took into account the increased cost of using interpreters and additional time required by medical staff to carry out complex communications with interpreters. However, we consider that in addition to interpreters, the provision of ethnic health workers for people with low English fluency also results in increased costs. The inclusion of ethnic health worker costs will also capture, to some extent, the additional costs mentioned by Victoria. For example, the additional costs due to providing services to a large number of different ethnic and religious groups.

81.We consider that the costs for both interpreters and ethnic health workers can be taken into account in the same weight. Therefore, we propose that the 2004 Review low English fluency weight will reflect costs due to both interpreters and ethnic health workers. Where data were supplied by States for the costs of ethnic health workers they were included, along with interpreter costs. Due to the inclusion of ethnic health worker costs, the updated weight will be referred to as the CALD weight. The calculations for updating the weight are shown in Table 7.

⁴ Australian Health Inequalities. Bulletin, Issue 2, July 2002, AIHW, pp, 1,5.

Table 7 2004 REVIEW CULTURALLY AND LINGUISTICALLY DIVERSE WEIGHT

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
a) Interpreter and ethnic health worker costs - from State data returns (\$000)									-
b) Adjusted costs (\$000)									
c) Extra costs to take into account additional clinical time ^(b) (\$167.50 *g) (\$000)									18598
d) Total costs attributed to interpreters and ethnic health workers (\$000) (b+c)									35843
e) Low English fluency population % (Census 2001)									3.0
f) Number of Separations (2000-01 NHMD)									3615734
g) Number of separations estimated to have low English fluency (e*f)									111033
h) Extra cost per separation due to interpreters, ethnic health workers and extra clinical costs (\$) (d/g)									322.81
i) % of average separation cost spent on interpreters (h/g)									11.39
j) Cost per separation 2000-01 NHMD: \$2834									
k) % of extra cost per separation due to interpreter costs and time (h (Aus))/j = 11.39%									
l) CALD weight : 1.11%									

(b) The extra costs incurred by clinicians due to additional clinical time was determined by: 1) calculating the proportion of the national average separation cost attributed to salaried medical officers; 2) calculating 50 per cent of this figure. The data for the extra costs incurred by clinicians due to additional clinical time were derived from the Australian Hospital Statistics 2000-01 report by the AIHW, Table 4.1, pp48. The national average separation cost was \$2834. The amount of the separation cost attributed to salaried medical officers was \$335.00. 50 per cent of \$335 is \$167.50. The estimated extra costs incurred due to spending more time with patients with low English fluency, was the estimated number of low English fluency separations multiplied by \$167.50.

82. *Views on additional costs.* We consider that including the extra costs due to providing ethnic health workers, in addition to the costs of interpreters and extra treatment time, will make a material improvement in the accuracy of the allowance. Therefore, as mentioned above, the costs relating to ethnic health workers have been included in the CALD weight.

83. States were also asked for data on any additional costs relating to the provision of culturally specific services to inpatients, such as the provision of prayer rooms. No State

was able to provide data. We think it unlikely that these costs would have a material impact, and in the absence of any data, we do not propose to introduce an adjustment to account for additional costs of culturally-specific services.

84. *Views on economies of scale.* We have found no evidence that States can achieve economies of scale in the provision of interpreter and ethnic health worker services.

85. *Views on other issues.* In response to the Northern Territory's argument on the Indigenous cost weights, it is noted that the weights were derived from the 1997 NATSIC study. Those weights were based on the extra clinical costs required for treating Indigenous inpatients for particular diagnoses and included the provision of allied health workers. Therefore, extra costs attributed to Aboriginal Liaison and Health Workers should already be included. In addition, the CALD weight now includes the extra costs of providing ethnic health workers. This weight will also be applied to all Indigenous inpatients with low English fluency.

86. *Commission decisions.* The Commission accepts that a conceptual case exists that higher costs are incurred in providing services to inpatients with low English fluency. Furthermore, the costs are material and data are available to measure them. However, a case also exists for recognising that inpatient use rates for people born in non-English speaking countries are lower than average. The Commission makes the following proposals:

- (i) To include a CALD weight, and include cost weighted use rates for people from NESBs;
- (ii) No further weight be introduced for additional costs associated with the provision of culturally appropriate services, such as prayer rooms, as proposed by Victoria. There is a conceptual case but insufficient evidence to show that the impact is material;
- (iii) No adjustment be introduced to account for economies of scale for people from different cultural backgrounds. It is possible that they exist but no evidence has been presented to support an assessment; and
- (iv) No adjustment be introduced to account for the extra costs attributed to Aboriginal Liaison and Health workers as these costs are already contained in the cost weights for Indigenous inpatients.

Socio-economic status

87. *1999 Review.* A socio-economic status (SES) weight was included to account for the greater use of public hospital inpatient services by people from low socio-economic groups.

88. The possibility of using health status measures as predictors of hospital use was considered. However, no adequate measure could be found that could readily be integrated with the Commission's approach of calculating standardised use and cost of State inpatient

services from data on the use and cost of inpatient services for all Australian public hospitals.

89. While it had been hoped that income, education and possibly employment status could be combined in a measure of socio-economic status, the Commission concluded that it would be more practical and simpler (especially in view of the data limitations) to use income as the sole measure of SES.

90. Data from the 1989-90 National Health Survey were used to estimate the different propensities of people in specified income ranges to use inpatient services⁵. The influence of Indigeneity on the use of services by people from low socio-economic status was removed to avoid double counting. Family incomes were weighted to reflect the number of dependent children and the employment status of the adults, using the Henderson simplified equivalence scales. These weights were applied where family incomes were less than \$26 000, or individual incomes less than \$15 600 (based on 1996 Census income data).

91. **Preliminary State views.** In brief, Tasmania suggested that the Commission use broader indices to measure low socio-economic status than just income.

92. **Staff proposals.** Commission staff proposed that the 1999 Review method be retained and that the weights be updated with data from the 2001 National Health Survey, which will differentiate between Medicare patients and private patients.

93. Staff acknowledged that populations with low SES are not particularly well defined by low income alone but there was a potential for double-counting if more than one type of index were used.

94. The use of broader indices such as SEIFA was not supported because it would mean a loss of transparency due to the inability to identify the effects of age/sex, Aboriginality and location incorporated within the indices.

95. **Further State views.** Queensland supported the Commission's proposed method for assessing low socio-economic status. It agreed that the introduction of other factors such as low educational attainment was likely to result in double-counting.

96. South Australia acknowledged the Commission argument that SEIFA could pose problems of double-counting with the age/sex, Indigeneity, and location weights. It stated that in the interests of transparency, the separate measurement of each of these weights, and the use of a separate measure (such as income) to assess socio-economic status could be retained.

97. Tasmania argued that the 2001 National Health Survey data were inadequate and should not be used to update the socio-demographic composition weights in the acute inpatients component. This was due to its belief that the sample was limited to a small number of private dwellings across Australia. Tasmania instead preferred the Commission to base its weights on data derived from the Australian Health Care Agreement which

⁵ The 1994-95 National Health Survey results were not used because public and private hospitals could not be differentiated.

contains age/sex utilisation rates derived from national casemix data by the AIHW (which were in turn derived from the National Hospital Cost Data Collection (NHCDC) which covered about 75 per cent of public hospital separations).

98. The Northern Territory supported the use of more than just income to measure low socio-economic status. It stated that low health status was influenced by factors other than just level of income. For example, people with a combination of low income, living in over crowded housing and low education are likely to have worse health status than if a person just had a low income.

99. For example, unemployed and poorly educated people are likely to be on low incomes, and poorly educated people are more likely to be unemployed. It is likely, therefore, that the weights applied to low income groups would at least partly cover the effects of differences in unemployment and poor education.

100. **Analysis.** In response to Tasmania's argument, the Commission is not aware of any data available through the NHCDC that identifies the use of inpatient services by income level. The 2001 NHS had a representative sample of 26 900 people, which sample the ABS considered sufficient to obtain valid results. In the 2004 Review, the low income level will be set to less than \$31,200 for households and less than \$20,800 for individuals. These cut-offs are the same as those to be used for 2001 Census data.

101. While the Northern Territory argument has merit, we are not inclined to expand the socio-economic status adjustment to include over-crowded housing and education status because the NHS data would be used beyond their limits. Double-counting would be a risk if other data sources were used.

102. **Commission decision.** The Commission accepts that a conceptual case has been made that socio-economic status is a major driver of inpatient use. The real issue is how it should be measured. We consider that a more robust and transparent assessment can be made if low income is used as the measure of low socio-economic status. It is the primary influence and at least partly reflects the other influences. The 2001 NHS will be used to update the low income use weights for the acute and non-acute inpatient components of the Inpatient Services assessment. This survey provides up-to-date Australian wide relevant information which the ABS considers statistically valid.

103. The data needed to update the 2004 Review Inpatient Services category low income weights were not available in time to be included in the Commission's preliminary calculations. The updated weights will be made available as soon as possible — we expect this to be before the September conference.

Region

104. **1999 Review.** A regional breakdown of the data used in the Hospitals assessment was introduced in the 1999 Review. This enabled differential inpatient use rates to be assessed for the different State regions. It also allowed issues such as economic environment to be taken into account as the level of provision of private hospital services will differ between State regions and impact on the demand for public hospital services.

The Rural, Remote, Metropolitan Areas (RRMA) classification was used to assess cost weighted use in different State regions.

105.**Staff proposals.** *Discussion Paper CGC 2002/22, Dispersion* stated that the ARIA+ classification would be used for the 2004 Review to classify regions.

106.**Further State views.** Queensland and Tasmania supported the use of ARIA+ as a measure of remoteness. However, they also supported modifications to the index to account for special cost drivers such as road conditions and seasonal inaccessibility. Furthermore, Queensland stated that results that are counter-intuitive should also be modified by Commission judgement.

107.South Australia noted that the ARIA+ index appeared to be the only option in the longer term for defining remoteness. However, it noted that there were problems in ARIA+ in that neither Tasmania nor the Northern Territory were classified as having a major city. Consequently, the disability factor would be skewed toward these States. It also said that if the Commission did make any changes to the ARIA+ classifications, it should have justification for doing so and not simply make adjustments because they had been made in the past.

108.**Analysis and Commission decision.** The data on hospital use indicate that use (including the type of treatment provided) varies by region and the variations are significant. There is thus a conceptual case for retaining a regional dimension in the socio-demographic factor. The Commission has decided to retain the regional factor. The ARIA+ classification will be used in the assessment.

Cost weights

109.**1999 Review.** Research carried out for the 1999 Review indicated that the use of DRG cost weights, instead of bed days, would better reflect the differential costs of treating acute inpatients. As the DRG cost weights were national averages, three other adjustments were also introduced to reflect differences between population groups that were considered to affect costs. They were:

- (i) the outlier cost adjustment – to reflect the differences between population groups in length of stay in hospital;
- (ii) the Indigeneity cost adjustment – to reflect the greater costs of servicing Indigenous inpatients; and
- (iii) the private patient cost adjustment – to reflect the lower costs to the public sector of servicing private patients in public hospitals.

Outlier cost adjustments

110.The outlier cost adjustment was applied to DRG cost weighted separations that had a length of stay markedly greater or smaller than average. Boundary points of three times and one third the average length of stay were used to define outliers because they

reflected the average State policy. Half of the DRG cost weight was applied to outlying days.

111. A majority of States currently use boundary points of three times and one third the average length of stay in their funding formulas for acute inpatient services. Tasmania does not use a casemix funding model to allocate funds, however, it does use it to report hospital activity on a State and national level. As part of its reporting of casemix activity, the same policy of costing outlying days is used.

112. **Preliminary State views.** No State raised concerns about the DRG cost weight or the outlier cost weight adjustment in either the preliminary or rejoinder submissions.

113. **Commission decision.** The Commission decided to retain the outlier adjustment.

Indigeneity cost adjustment

114. **1999 Review.** The DRG cost weights were adjusted to reflect the extra costs incurred in treating Indigenous inpatients.

115. Table 8 shows the average separation cost at Major Diagnostic Category (MDC) level for Indigenous and non-Indigenous inpatients. These separation costs were derived from the National Aboriginal and Torres Strait Islander Casemix study (NATSIC), 1997⁶.

116. Due to low separation numbers for many DRGs in the study, reliable estimates of average DRG costs could not be made, and the more aggregated MDC level data were used. It was assumed that the differences observed for an MDC applied to all DRGs within it. Data at the MDC level indicated that cost differences did exist, and that in some cases they were large. The differences in the costs were used as the basis of the 1999 Review Indigeneity cost adjustment.

117. The cost differences shown reflected the combined effects of longer length of stay by Indigenous inpatients and higher costs of treatment. To avoid double counting of the costs associated with above average length of stay (which are reflected in the outliers adjustment), the Indigeneity cost adjustment was based on 50 per cent of the cost differences at the MDC level. The figure of 50 per cent was based on judgement after meeting and discussing the issue with State health authorities during the development of the 1999 Review assessment.

⁶ National Aboriginal and Torres Strait Islander Casemix Study (1997), Commonwealth Department of Health and Family Services.

Table 8 AVERAGE COST PER SEPARATION FOR MAJOR DIAGNOSTIC CATEGORIES (MDC)

	Indigenous	Non-Indigenous	Diff.
	\$	\$	%
Pre-MDC (Tracheostomy Procedures, Transplants, ECMO)	32541.3	23389.7	39.13
MDC 01 Diseases & Disorders of the Nervous System	2818.4	2314.7	21.76
MDC 02 Diseases & Disorders of the Eye	1498.9	1088.1	37.75
MDC 03 Diseases & Disorders of the Ear, Nose, Mouth & Throat	1355.2	1057.2	28.18
MDC 04 Diseases & Disorders of the Respiratory System	1833.0	1829.1	0.21
MDC 05 Diseases & Disorders of the Circulatory System	2836.6	2563.4	10.66
MDC 06 Diseases & Disorders of the Digestive System	1713.1	1207.9	41.82
MDC 07 Diseases & Disorders of the Hepatobiliary System & Pancreas	2716.2	2081.9	30.47
MDC 08 Diseases & Disorders of the Musculoskeletal System & Connective Tissue	2254.7	2237.3	0.78
MDC 09 Diseases & Disorders of the Skin, Subcutaneous Tissue & Breast	2142.8	1469.8	45.78
MDC 10 Endocrine, Nutritional & Metabolic Diseases & Disorders	3108.5	2131.3	45.85
MDC 11 Diseases & Disorders of the Kidney & Urinary Tract	520.5	441.1	18.00
MDC 12 Diseases & Disorders of the Male Reproductive System	1235.1	1144.8	7.89
MDC 13 Diseases & Disorders of the Female Reproductive System	1850.5	1228.2	50.67
MDC 14 Pregnancy, Childbirth & the Puerperium	1497.6	1130.2	32.51
MDC 15 Newborns & Other Neonates	3188.3	3011.0	5.89
MDC 16 Diseases & Disorders of Blood, Blood Forming Organs, Immunological Disorders	1915.3	936.8	104.45
MDC 17 Neoplastic Disorders (Haematological & Solid Neoplasms)	835.9	598.0	39.79
MDC 18 Infectious & Parasitic Diseases, Systemic or Unspecified Sites	2548.2	1945.5	30.98
MDC 19 Mental Diseases & Disorders	2032.5	2527.1	-19.57
MDC 20 Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders	753.2	1229.8	-38.76
MDC 21 Injuries, Poisonings & Toxic Effects of Drugs	1680.7	1512.8	11.10
MDC 22 Burns	3889.6	3214.8	20.99
MDC 23 Factors Influencing Health Status & Other Contacts with Health Services	165.1	905.1	83.97
Average all MDCs	1 627.27	1 545.65	5.30

Source: National Aboriginal and Torres Strait Islander Casemix Study (1997), Commonwealth Department of Health and Family Services.

118. **Preliminary State views.** Victoria suggested that a cost differential weighted by use would more accurately reflect the true impact and incidence of costs. It argued that such a cost differential should form the basis of the Commission's assessment of the relative

costs of treating Indigenous inpatients. It considered that any further calculations were unnecessary and presented significant risk of double counting.

119. Western Australia argued that there was no basis for assuming that half the additional cost of treating Indigenous inpatients was reflected in lengths of stay, and that the Commission should no longer discount the adjustment. It also said that the relative costs for Indigenous clients compared to non-Indigenous clients increased significantly with increasing remoteness. Cost differentials were influenced by variables such as language difficulties, cultural factors and health status. Accordingly, Western Australia said that the Commission's current cost adjustment for Indigenous inpatients was too low.

120. South Australia asked the Commission to re-evaluate the adjustment given to non-traditional Indigenous people relative to non-Indigenous people. It provided some data to show differential costs involved in providing health services to traditional Indigenous people, non-traditional rural Indigenous people and non-traditional urban Indigenous people.

121. **Staff proposals.** Commission staff proposed that the Indigenous cost adjustments continue to be applied in the 2004 Review. Evidence strongly supported the retention of this adjustment.

122. A regional disaggregation based on RRMA classification was used in the 1999 Review Hospitals assessment. This enabled the cost weighted use by Indigenous people in different State regions to be identified. While this method did not take into account costs and use for the specific Indigenous groups, as suggested by South Australia, it assumed that the majority of the Indigenous population in the remote regions could be identified as 'traditional', while those in the urban regions could be identified as 'non-traditional'.

123. Based on evidence available, it was proposed to retain the 50 per cent discount to avoid double counting with the outlier adjustment.

124. **Further State views.** New South Wales and South Australia agreed with the Commission proposal that the Indigenous cost weights continue to be discounted by 50 per cent.

125. Victoria did not support a differential assessment of distinct Indigenous populations. It was not aware of any nationally consistent, comprehensive and robust data sources that would identify the separate cultural and linguistic differences of Indigenous groups.

126. Queensland supported the continued use of remoteness to capture the differential needs of Indigenous population groups in remote locations. It noted that use and unit cost impacts of Indigenous inpatients could also be identified by socio-economic status and cultural and linguistic differences. Therefore, their use could lead to the possibility of double-counting as they may already be taken into account, to some extent, by applying differential weights for low English fluency and socio-economic status.

127. Queensland said that if the outlier cost weight was continued, it supported the 50 per cent discount of Indigenous cost weights for all regions on the basis of simplicity.

128. Western Australia argued that the cost weight for Indigenous inpatients should be 10 per cent and even more in remote regions. This was based on:

- (i) its studies of relative costs at Derby Yerrigan which found that Indigenous patients cost XX per cent more due to factors such as language, culture and co-morbidities;
- (ii) data from New South Wales which showed that in Sydney inpatient costs for Indigenous people were X per cent greater than for non-Indigenous people; and
- (iii) a Western Australia Department of Health study which showed that costs for Indigenous people were XX per cent greater in Perth than for non-Indigenous people and XX per cent greater in remote areas.

129. South Australia and the Northern Territory urged the Commission to further investigate whether its remoteness based adjustment adequately reflected the additional cost pressure caused by traditional Indigenous people.

130. The Northern Territory said that it was concerned that the Indigenous cost weights understated the costs of providing hospital services to Indigenous people as a whole. It said that the extra costs of treating Indigenous people could be attributed to language, culture and co-morbidities, particularly chronic diseases. The Northern Territory concluded that the Commission should review the adequacy of the Indigenous cost weights and should stop discounting them. While the Northern Territory acknowledged that the Commission needs to ensure that the Indigenous cost weight did not include costs already accounted for by the outlier adjustment, it questioned the degree to which this is occurring.

131. The Northern Territory stated that the purpose of the 50 per cent discount was to exclude the proportion of additional costs associated with length of stay from the Indigeneity cost weights. It went on to say that if the discount and the outlier adjustment were to account for the same costs, it would require Indigenous patients to have lengths of stay that were over three times the average. The Northern Territory provided data to show that only XX per cent of their Indigenous patients had longer than average lengths of stay. Accordingly, it suggested the Commission appeared to be over compensating for the possibility of double counting.

132. *Analysis.* We consider that there may be a conceptual case that traditional Indigenous people have different inpatient use rates and costs. However, in the absence of any available data, we consider that the most practical way to capture the traditional versus non-traditional impact is through a regional disaggregation.

133. In the 1999 Review, acute inpatient separations were broken down by Indigenous status and region. This meant that cost-weighted use rates were derived for Indigenous and non-Indigenous people for each regional classification. It was assumed that the majority of the Indigenous population in remote regions could be identified as 'traditional,' while those in urban regions could be identified as 'non-traditional.' This approach is proposed to continue in the 2004 Review.

134. In response to Western Australia and the Northern Territory, we do not consider that a case has been made for the introduction of any additional Indigenous weights. The Commission currently applies numerous adjustments to take into account the extra costs associated with providing inpatient services to Indigenous people. These adjustments were based on evidence from Australia-wide studies, or State data returns, that reflected the extra costs incurred in treating Indigenous inpatients. The adjustments currently applied include:

- (i) the application of Indigenous inpatient under-identification percentages to each State's Indigenous inpatient population;
- (ii) the application of Indigenous weights to the DRG cost weights to account for co-morbidities;
- (iii) the application of low English fluency weights to each Indigenous person with low English fluency as classified by the Census; and
- (iv) the application of low income weights to Indigenous people classified as having low income by the Census.

135. We consider that these adjustments already cover the types of extra costs attributable to Indigenous inpatients raised by Western Australia and the Northern Territory.

136. With respect to the discounting of the Indigenous weights, we consider that a strong case has been made to only apply a 50 per cent discount to the Indigenous weights if the inpatient is considered a length of stay outlier. Therefore, we propose that only those Indigenous inpatients whose length of stay is below a third or three times greater than the average length of stay for a particular DRG will have a 50 per cent discount applied.

137. **Commission decision.** The Commission considers that there is a very strong conceptual case that the costs of treating Indigenous people are higher than for non-Indigenous people. The case is supported by data from the NATSIC study which the Commission is satisfied is comparable and representative and provides a strong basis for the increased costs of treating Indigenous inpatients. Therefore, the Commission has decided to continue the application of the Indigenous weights based on the NATSIC study.

138. The Commission acknowledges the conceptual case that traditional Indigenous people may have different inpatient use rates and costs from non-traditional Indigenous people. However, there are insufficient data to decide whether or how any adjustments may be made. For this reason, the Commission proposes not to introduce a new adjustment to account for differential use and/or cost rates for traditional and non-traditional Indigenous people.

139. The Commission considers that a conceptual case has not been made for introducing any new Indigenous cost weight adjustments. There is insufficient evidence on which to consider whether and how they would be made.

140. The Commission accepts that a case exists to discount the Indigenous cost weights, by 50 per cent, for those Indigenous inpatients who are length of stay outliers. The

case is supported by evidence which the Commission is satisfied provides a strong basis for changing the application of the discount.

Private patient cost adjustment

141.**1999 Review.** The cost of treating a private patient in a public hospitals is less than the cost for treating a public patient in a public hospital. This is because private patients in public hospitals do not incur salaried medical officer costs. A cost discount was therefore applied to private patient separations in public hospitals. In the 1999 Review, the discount was 12 per cent, based on the New South Wales resource distribution formula.

142.**Preliminary State views.** New South Wales recommended that the Commission amend the 12 per cent discount used for private patients in public hospitals to 9 per cent, based on its latest calculations. Its analyses revealed that for most case-types, a private patient staying a given number of days will cost between XX per cent and XX per cent of the cost of public patients in the same DRG, staying the same number of days, in the same hospitals, with the same mode of discharge.

143.**Staff proposals.** Staff intended to continue the adjustment and asked for comments on the updated discount figure of 9 per cent suggested by New South Wales.

144.**Further State views.** New South Wales supported the proposal to reduce the private discount rate from 12 per cent to 9 per cent.

145.Western Australia stated that the private patient discount should be raised to 14 per cent. This was devised by comparing the cost of salaried medical officers (which are not incurred for private patients) with total public hospital expenditure attributable to public patients. Its calculations are in Table 9.

146.South Australia stated that it would support a lower discount more reflective of actual costs differences in treating public and private patients. It noted that it did not have data equivalent to New South Wales to show its relative costs of private versus public patients in public hospitals.

147.Tasmania stated that it recognised that the cost of private patients in public hospitals should be adjusted downwards to remove those components met by patients and/or their health funds. However, it argued that the size of the discount should be around 50 per cent and not the 12 per cent currently used or the 9 per cent suggested by New South Wales. Tasmania's figure of 50 per cent was based on data that presented a breakdown of the price components paid by private patients in public hospitals, or their health funds, minus the normal public patient costs.

148.The Northern Territory supported changing the discount to 9 per cent if the Commission was confident that it reflected national trends of increasing costs of treating private patients in public hospitals.

149.**Analysis.** The private patient adjustment takes into account the proportion of inpatient costs associated with doctors' costs that are not met by the public hospital system. Other costs such as accommodation, imaging, pathology and prostheses are met by the

States but reimbursed through patient fees. The Hospital Patient Fees category covers these receipts from inpatients. Therefore, to avoid double-counting, a discount for these types of components are not included in the Hospitals assessment.

Table 9 WESTERN AUSTRALIAN CALCULATION OF PRIVATE PATIENTS IN PUBLIC HOSPITAL DISCOUNT FACTOR

Explanation		\$ million	
Western Australian version			
Total public hospital expenditure, excluding depreciation	a	15,545.045	AIHW report p33
Superannuation	b	814.938	AIHW report p33
Public hospital expenditure, excluding depreciation and superannuation	c	14,730.107	a-b
Expenditure on salaried medical officers (only incurred for public patients)	d	1,791.450	AIHW report p33
Expenditure attributable to both public and private patients	e	12,938.657	c-d
Proportion of patient days in public hospitals that are for private patients	f	16.4	AIHW report p96
Public hospital expenditure attributable to private patients	g	2,121.940	e*f
Public hospital expenditure attributable to public patients	h	12,608.167	c-g
Cost discount for private patients		14.2%	d/h

Source: 2000-01 Australian Hospital Statistics, Australian Institute of Health and Welfare, 2002. pp 96 and 33.

150. The States suggested discounts ranging from 9 to 50 per cent. The National Hospital Costs Data Collection (NHCDC) provided a cost component disaggregation of inpatient separations⁷ that permitted another calculation. The proportion of ward medical costs, which includes salaries of medical and sessional officers (\$321), to total inpatient separation cost (\$2 707) was 11.8 per cent.

151. While it is possible to estimate the national average separation cost attributable to salaried medical officers from sources such as the NHCDC, we consider the New South Wales approach to be more reliable. New South Wales said that its suggested private patient discount took into account a variety inpatient variables including length of stay, clinical complexity, patient episode type and patient status. Therefore, we consider the figure of 9 per cent, put forward by New South Wales, to be more reliable than those derived from other calculations.

152. **Commission decision.** The Commission considers that a conceptual case exists for applying a discount to private patients in public hospitals. It considers that the analyses outlined by New South Wales in deriving its private patient discount figure (9 per cent) are the most accurate representation of the discount. Therefore, the Commission proposes to

⁷ National Hospital Costs Data Collection, Cost Report, Round 5, 2000-2001, Table 16, pp20. Commonwealth Department of Health and Ageing in conjunction with the States and Territories, August 2002.

continue the private patient adjustment, and to change the discount from 12 per cent to 9 per cent.

Additional adjustments

153.**Overview.** A number of States have said they faced situations that led to greater use rates of inpatient services which caused the Commission method of assessing national average use rates to be inadequate. These State issues are listed below.

- (i) Queensland and Western Australia said that the use of Australian average Indigenous use rates disadvantaged those States with higher than average Indigenous use rates. The preferred method was to determine separate Indigenous use rates for the northern States and the southern States.
- (ii) New South Wales suggested that the Commission make allowances for HIV/AIDS and Hepatitis C in all its health categories.
- (iii) The Northern Territory asked for a special weight to recognise its extraordinarily high and increasing use rate of renal dialysis.
- (iv) The Northern Territory also asked the Commission to introduce an assessment to account for its higher than average level of chronic disease.

154. Staff acknowledge that States will have higher or lower use rates for specific illnesses in relation to other States. The main issue to be decided was whether a case exists that higher than average use rates for specific illnesses were due to underlying disabilities stemming from population characteristics or unavoidable influences on costs per service.

155. We have examined each of the State issues. The full analyses are presented in Attachment A. A brief outline of the Commission's decisions are presented below.

156.**Commission decisions.** The Commission does not consider, on balance, that conceptual cases have been made for the inclusion of differential Indigenous use rates, or adjustments for HIV/AIDS and drugs, renal dialysis and chronic diseases. This is because:

- (i) There is insufficient evidence that the Indigenous use rates are significantly different across the various State regions. Also, there is evidence to suggest that differences in use rates (including Indigenous use rates) may be influenced by State policies.
- (ii) The Commission does not consider that a case exists to continue the HIV/AIDS and drugs adjustment for New South Wales. The data do not support that New South Wales has a significantly higher than average use rate for HIV/AIDS and drugs related illnesses.
- (iii) There is insufficient evidence that the Northern Territory's renal dialysis use rates are driven by disabilities related to special

Indigenous needs over and above other States. Also, there is evidence to suggest that differences in use rates may be influenced by State policies on where dialysis may be provided. There is also evidence to suggest that the data for the Territory are affected by its policy of recording all renal dialysis treatment as inpatient episodes.

- (iv) The data show that the Northern Territory's use rates for chronic diseases were not markedly different to other States.

157. Therefore, the Commission does not propose to introduce new adjustments for differential Indigenous use rates, or for chronic diseases in the Northern Territory. Further, it proposes to cease the Northern Territory renal dialysis adjustment and the New South Wales HIV/AIDS and drugs adjustment in the 2004 Review.

Impact of the private hospital sector

158. **1999 Review.** A regional breakdown of the data used in the Hospitals assessment was introduced in the 1999 Review. This enabled issues such as economic environment to be taken into account because the level of provision of private hospital services and by implication the demand for public hospital services, differs between State regions. In the 1999 Review, the Rural, Remote, Metropolitan Areas (RRMA) classification was used to assess cost weighted use in different State regions.

159. **Preliminary State views.** New South Wales said that relative to other States, its public hospital system shoulders a greater burden in treating patients in public hospitals, particularly more complex patients. It said this additional burden was not fully captured in the Commission's existing assessment. The introduction of a regional dimension picked up differences in private versus public supply and the higher supply of private hospitals in metropolitan areas. However, it will not adjust for the underlying differences between States in the share of use met by the private sector. It recommended that the Commission include a further adjustment for economic environment in the inpatient component.

160. **Staff proposals.** Staff provided data (see Table 10) to show that New South Wales had a higher than average rate of use of private patients in public hospitals, and a lower than average rate of use by private patients in private hospitals. However, neither of these were remarkably different from the average. Based on this, there was no inclination to pursue the issue further.

161. **Further State views.** New South Wales stated that it disagreed with the proposal not to consider the impact of a smaller private hospital sector. It said that it was not appropriate to combine the use rates of private patients in public hospitals and private patients in private hospitals, as this would disguise the real impact on States with smaller private hospital sectors.

162. It said that private patients in public hospitals were a net cost to NSW Health and not a saving to the public hospital sector. In addition, the private patients in public hospitals cohort had a XX per cent greater clinical complexity than private patients in private hospitals. They were also affected by (revenue) policy differences between States

and hence should not be used. New South Wales said that only the utilisation of private hospitals should be considered because this was more policy neutral at State level and more related to market factors.

163. New South Wales went on to say that its use rate of private patients in private hospitals was significantly higher compared to the national average (ie XX more cost weighted separations). It said that this difference in its use rate was more than all the private hospital separations in Tasmania and the ACT combined, and in cost terms equated to more than \$XX million per annum. Furthermore, even if the separation figure was discounted by 50 per cent, for the effect of policy differences, the difference remained material.

164. Based on this New South Wales disagreed with the Commission that its private patients in private hospital use rates were not significantly different from the average.

165. The ACT pointed to information provided in the *Inpatient Services Discussion Paper CGC2002/29*, which showed that the ACT had the second lowest rate of private patient separations. It said the effect of this shortfall was to increase the burden on public hospitals.

166. The ACT stated that factors which influenced the low number of private patients in the ACT included:

- (i) the relatively small population of the ACT and its surrounding regions;
- (ii) there were limited private feeder systems. Private hospital patients required referral from GPs onto private specialists, and the ACT has the lowest number of GPs and private specialists; and
- (iii) the number of DRGs provided for treatment in private hospitals in each State varied. The ACT private hospitals treated the lowest number of DRGs.

167. The ACT noted that its low proportion of private patients was not because it provided a better than average public hospital system. A major incentive for people electing to be private patients is to avoid waiting times. It noted that its waiting times were relatively longer than other States. It also stated that it actively encouraged the development of private hospital services. However, despite this, the National Capital Private Hospital was now for sale.

168. On these grounds, the ACT asked that the economic environment component of the socio-demographic composition factor be redesigned. It asked that such a component be calculated using hospital separation data, and not a regional classification. This was because location was a very poor indicator of private hospital access in the ACT. Alternatively, the ACT said that it should be treated as an 'other rural' region.

169. **Analysis.** We acknowledge that New South Wales and the ACT have below average private patients in private hospital use rates. However, the issue is whether these use rates are disability or policy driven.

170. We consider that States' private hospital use rates are policy influenced because States are often involved in the establishment of private hospitals. Hence use rates of both private patients in public hospital and private patients in private hospitals need to be considered together.

171. It is our understanding that New South Wales had, in the past, facilitated medical practitioners' access to public hospitals for private business. It is possible this created a disincentive for the establishment of private hospitals.

Table 10 PRIVATE PATIENT SEPARATIONS BY STATE, 2000-01, PER 100 POPULATION

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aus
State populations ^(a)									18,758,065
No. of separations- Private patients in public hospitals ^(b) (DRG cost weighted)									389,916
Use rate									2.1
No. of separations - Private patients in private hospitals ^{(c)(d)}									2,088,526
Average DRG cost weight ^(e)									0.90
DRG cost weighted separations									1,879,673
Use rate									10.5
Total private patients (DRG cost weighted)									2,353,130
Use rate									12.1

(a) 2001 Census Population.

(b) 2000-01 National Hospital Morbidity Data, Australian Institute of Health and Welfare.

(c) Australian Hospital Statistics 2000-01, Australian Institute of Health and Welfare (2002). This data include all private patient separations in private hospitals except Department of Veterans Affairs patients which were not included, Table 6.1 pp 93.

(d) Not all private hospital separations are included in the National Hospital Morbidity Data. The counts of private hospital separations presented in the Australian Hospital Statistics 2000-01, Australian Institute of Health and Welfare (2002) report are likely to be underestimates of the actual counts. In particular, the separations for private free-standing day hospital facilities were incomplete for Victoria, South Australia, not included for the ACT and not applicable for the Northern Territory. In addition, other private hospital separations were not complete for South Australia, Tasmania and not included for the Northern Territory. However, it should also be noted that reported separations for public hospitals were incomplete for Queensland, Tasmania and the ACT. Appendix 5, Australian Hospital Statistics 2000-01, Australian Institute of Health and Welfare (2002), pp 268.

(e) The average DRG cost weight for private patients in private hospitals for each State was obtained from Australian Hospital Statistics 2000-01, Australian Institute of Health and Welfare (2002), Table 6.9 pp 101. The Commission does not have access to unit record data for patients in private hospitals.

(f) The average DRG cost weight for private patients in private hospitals for the ACT was cost weighted by the proportion of the number of patients from both New South Wales and the ACT. This is because 20.3 per cent of the ACT's separations were from New South Wales. The New South Wales patients had a higher average DRG cost weight than ACT patients. This adjustment was not carried out for other States as the level of cross-border private patients in private hospitals was not material, in the range of 0.3 to 4.2 per cent.

172. We do not consider that the ACT's lower than average use of private services can be explained by its small population. The ACT has about the same inpatient population catchment size as Tasmania and easier physical access, but Tasmania has higher private patient use.

173. When comparing GP and specialist use rates, both Queensland and the ACT have the same rate (see Table 11). Although the ACT private patient use rate is below the national average, Queensland's is slightly higher than that average. In addition, Tasmania has slightly below average GP and specialist use rates but its private patients use rate is above average. Therefore, these figures suggest that a link cannot be made between feeder system size in a State and private patient use rates.

Table 11 GENERAL PRACTITIONER AND SPECIALIST USE RATE

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
July 2000-June 2001									
Specialist use rate									1.03
GP use rate									4.84
July 2001-June 2002									
Specialist use rate									1.05
GP use rate									4.89

Source: Health Insurance Commission website. All Medicare by broad type of service processed from July 2003 to April 2003.

The figures in the report include only those services that are performed by a registered provider, for services that qualify for Medicare Benefit and for which a claim has been processed by the HIC. They do not include services provided by hospital doctors to public patients in public hospitals or services that qualify for a benefit under the Department of Veterans' Affairs National Treatment Account.

The Health Insurance Commission website provided data on the number of attendances to GP' and specialists by State. The attendance figures were divided by the States' population figures to obtain use rates.

174. The low range of DRGs offered in private hospitals could be the result of lower use for services rather than a commercial decision not to offer them.

175. **Commission decision.** The Commission does not consider that a conceptual case has been made that the below average private patient use rates for New South Wales and the ACT are caused by underlying disabilities rather than State policies.

176. Therefore, the Commission proposes not to introduce a new adjustment to account for the lower than average use rates of private patients in private hospitals in New South Wales and the ACT.

Eligible overseas visitors

177.**1999 Review.** No adjustment was made for the cost of treating eligible overseas visitors.

178.**Preliminary State views.** New South Wales noted that Australia has a range of reciprocal health care agreements with other countries. Under these agreements, overseas residents working in or visiting Australia can be treated in New South Wales' public hospitals as Medicare eligible patients. Reciprocal agreements currently exist with New Zealand, UK, Netherlands, Italy, Sweden, Malta, Finland and Ireland.

179.New South Wales stated there were XX separations of eligible visitors in 2000-01. It estimated the cost of providing acute inpatient services to these patients at \$XX million and said it was not in a position to control the number of overseas people seeking treatment in its hospitals. It said the higher per capita costs it faced should be recognised by the Commission.

180.New South Wales recommended that short-term visitors from countries with a reciprocal health agreement should be included in the estimated population in the Inpatient Services assessment.

181.**Staff proposals.** Commission staff were not inclined to introduce such an adjustment due to the complexity of calculating it and its small impact. In addition, there is a lack of net data on the number of eligible overseas inpatients treated in Australia compared to the number of Australian residents treated overseas

182.**Further State views.** South Australia, Tasmania and the Northern Territory supported the staff views. Other States did not comment.

183.**Commission Decision.** The Commission does not consider that a conceptual case exists for an adjustment for short-term visitors from countries with a reciprocal health agreement. There is a lack of net data to support whether such an adjustment should be made.

184.Therefore, the Commission has decided not to introduce an adjustment for eligible overseas visitors.

Cross-border assessment

185.**1999 Review.** Due to arrangements in the 1998 Australian Health Care Agreements (AHCAs), cross-border costs were not taken into account in the Hospitals assessment.

186.**Preliminary State views.** The ACT asked that a cross-border factor be introduced because it was not fully reimbursed by New South Wales for the provision of hospital services to New South Wales residents.

187.The ACT argued that the average DRG costs applied to cross-border inpatients did not capture the additional costs associated with the socio-demographic composition of the New South Wales population surrounding the ACT.

188.The ACT also asked that the Inpatient Services assessment reflect the non-resident use of ACT ambulance services. It estimated that about XX per cent of its non-resident customers use the ACT's ambulance services and do not reimburse the government.

189.**Staff proposals.** Commission staff considered that mechanisms existed in the Australian Health Care Agreements for the reimbursement of cross-border services and that the introduction of a cross-order assessment was not necessary.

190.Commission staff said that it would be appropriate for the ACT to discuss the issue of reimbursement of ambulance costs with New South Wales and enter into a bilateral agreement. If provisions to enter into such an agreement were not available in the next round of AHCA's, this matter could be re-examined at that time.

191.**Further State views.** New South Wales supported the proposal not to include a cross border factor, including recognition of ambulance costs.

192.The ACT argued that it had no means of seeking recompense through the AHCA because the cross-border part of the agreement did not reflect the socio-demographic composition of patients.

193.The ACT asked that an adjustment to the socio-demographic composition factor be introduced. This should reflect the use and higher costs incurred by the ACT because of the socio-demographic composition of New South Wales cross-border users.

194.**Commission decision.** The Commission does not accept that it should examine cross-border needs when reimbursement arrangements exist under the Australian Health Care Agreements.

Cost of refugees

195.**1999 Review.** No adjustment was made for the cost of treating refugees.

196.**Preliminary State views.** South Australia argued that this additional cost due to Australian Government policy should be accounted for in the assessment.

197.**Staff proposals.** Staff proposed that no assessment was necessary. This was because people on temporary protection visas were Medicare eligible patients, and under the Australian Health Care Agreements they are the responsibility of States. Staff considered that the current socio-demographic composition factor would account for needs arising from this group.

198.Staff said that if South Australia could show that disabilities existed for this group that were not already picked up in the assessment, and that they had a material effect on grant share the issue would be reconsidered.

199.*Further State views.* No further views were received.

200.*Commission decision.* The Commission has seen no evidence that a disability driven case exists for assessing use rates for refugees. Thus it does not consider that a conceptual case exists for introducing a new adjustment to account for inpatient costs relating to refugees.

Proposed method and results

201.The Commission will calculate the 2004 Review acute inpatient socio-demographic composition factor using a similar method to that used in the 1999 Review.

202.The socio-demographic composition factor reflects the Australian standardised use and unit cost influences of different population groups on the total cost of acute inpatient services. The assessment is based on use rates and Diagnosis Related Group (DRG) cost weights for different population groups. Use rates measure inpatient use, while DRG cost weights measure the relative cost of treating inpatients. Data on the use and cost of services by different population groups were derived from the National Hospital Morbidity Dataset and the 2001 Census of Population and Housing.

203.Use rates and/or DRG cost weights will be calculated for all acute inpatients (excluding the mental health classified inpatients) grouped by:

- (i) age;
- (ii) sex;
- (iii) Indigeneity;
- (iv) people born in non-English speaking countries;
- (v) low English fluency/CALD;
- (vi) population location; and
- (vii) socio-economic status.

204.Three adjustments will be made to the DRG cost weights. They are:

- (i) outlier cost adjustment;
- (ii) Indigeneity cost adjustment; and
- (iii) private patients cost adjustment.

205.The **factor calculation** will involve the following steps.

- (i) The National Hospital Morbidity Datasets will be adjusted in the following way:

- acute inpatient separations in public hospitals will be selected;
 - unqualified neonates will be removed;
 - mental health inpatients in designated psychiatric wards and psychiatric institutions will be removed — these will be assessed in the non-acute inpatients component; and
 - non-acute separations will be removed because these will be assessed in the non-acute expenditure component.
- (ii) Each separation will be weighted by its DRG cost weight adjusted for outliers, Indigeneity and private patients.
- (iii) The number of Indigenous separations will be increased to correct the data for under-recording for each age group, sex, and region. The non-Indigenous separations will be decreased accordingly, to keep the total number of separations unchanged.
- (iv) A matrix of cost weighted separations broken down by age groups, sex, Indigeneity, people born in non-English speaking countries and region will be prepared from the NHMD.
- (v) This matrix will be divided by an equivalent matrix from the 2001 Census of Population and Housing data. The resulting matrix will provide the national average (standard) cost weighted use rates by age groups, sex, Indigeneity, people born in non-English speaking countries and place of residence.
- (vi) The resulting standard use matrix will be adjusted for the effect of low socio-economic status by applying the low income weights.
- (vii) The low English fluency weight will be applied to the high and low income matrices.
- (viii) Thus four matrices will be used to derive weighted inpatient use:
- an Australian standard cost weighted use matrix — the high income and high English fluency cost weight matrix;
 - an Australian standard cost weighted use matrix adjusted for low English fluency — the high income and low English fluency cost weight matrix;
 - an Australian standard cost weighted use matrix adjusted for low income — the low income and high English fluency cost weight matrix; and

- an Australian standard cost weighted use matrix adjusted for low income and for low English fluency — the low income and low English fluency cost weight matrix.
- (ix) An equivalent (2001) Census of Population and Housing data matrix broken down by State, age, sex, Indigeneity, people from non-English speaking backgrounds, usual place of residence, income and English fluency will be multiplied by the four matrices. The results for each matrix will be added for each State to derive total weighted inpatient use.
- (x) Each State's total weighted use will be divided by its total population to derive a weighted use rate.

206. Each State's weighted use rate will be divided by the national average use rate to obtain the socio-demographic composition factor.

207. **2004 Review preliminary factor calculation.** The National Public Hospital Morbidity Data, containing ARIA+ region classifications, used to calculate the socio-demographic composition factors were not available in time to be included in the preliminary calculations. The preliminary calculations have been based on the 2003 Update factors.

208. **Updateability.** The acute inpatient socio-demographic composition factor will be updated annually.

HOSPITAL COSTS

209. **1999 Review.** In the 1999 Review, the Commission identified four main types of cost disabilities that affect State expenditures on hospitals. These were cost differences relating to:

- (i) the different cases treated in hospitals;
- (ii) the location of hospitals away from capital cities;
- (iii) the small size of hospitals; and
- (iv) training, research and extraordinary case complexity.

210. The first of these effects was assessed in the socio-demographic composition factor, which is based on inpatient separations weighted by DRGs. For the remaining three effects, the Commission considered whether to assess them by separate factors or in a combined factor.

211. The Commission decided to assess a single hospital costs factor to allow for influences on costs other than those stemming from the characteristics of patients and the

treatments they receive, which was captured in the socio-demographic composition factors. That factor was intended to reflect the effects on inpatient costs of influences that might otherwise have been assessed in separate factors for **dispersion**, **service delivery scale** and **training, research** and **extraordinary case complexity**. The assessment of a single factor removed the need for judgments that would have been required to exclude double counting.

212.The hospital costs factor took **dispersion** and **service delivery scale** into account by calculating inpatient separation costs for different State regions. (In general, hospitals in non-urban regions would incur dispersion-affected costs and tend to be smaller, with lower numbers of separations.) Data on inpatient separation costs and hospital locations were derived from the National Hospital Establishment Dataset (NPHEd). The costs of patient transport were excluded from the calculation because they were accounted for in the cost of patient transport factor.

213.Extra costs due to **training, research and extraordinary clinical complexity** were taken into account by giving a cost weight to all teaching hospitals. Extraordinary clinical complexity referred to cases where classification into an appropriate diagnostic related group (DRG) cannot be made — cases involving costs over and above those covered by the DRG cost weights. For example, extremely complex surgery required for separation of Siamese twins.

214.*Preliminary State views.* Victoria suggested that the Commission should calculate a Relative Cost Index (RCI) for each State region, and use those RCIs directly to calculate the service delivery scale disability. It stated that given the average cost per separation for each State region is based on actual service volumes, it implicitly includes all service delivery scale effects. Calculation of the Australian average RCIs for each level of remoteness removed the State specific element of the scale effect, thereby underestimating the scale effect for which the adjustment was intended.

215.Victoria also suggested that savings due to technology could be made through the use of video-conference calls and telemedicine. A discounting of these costs in the hospital costs factor was therefore appropriate.

216.Tasmania said that the averaging process used in the hospital costs factor placed it at a disadvantage because it had a relatively high proportion of very small hospitals. It considered that the measurement of this disability would be improved by increasing the number of categories used to group the size of hospitals. It did not want a change to the overall approach.

217.The ACT raised a number of issues relating to service delivery scale. The ACT said it would like a service delivery scale factor for clinically based services incorporated into the assessment to take account of its circumstances, including:

- (i) the wide range of services and large number of specialities that it is required to provide to a relatively small population, and the few opportunities for economies of scale to be achieved given the low throughput; and

- (ii) the inability of the population of the ACT and New South Wales Southern Area Health Service to support the throughput required to ensure certain speciality services achieve benchmark costs.

218. The ACT suggested that a range of Diagnosis Related Groups should be examined to determine a factor by comparing staffing to throughput level ratios.

219. The ACT also said that its diseconomies of scale affected the cost of providing appropriate teaching and research facilities necessary to achieve accreditation as a teaching hospital. It said it attempted to disperse those costs over minimal throughput, and over a patient profile which more closely resembled that of a relatively inexpensive non-teaching hospital. It asked the Commission to assess a scale factor to account for teaching and research scale-related costs in addition to the hospital costs factor.

220. The ACT also noted that consideration should be given to the capacity of smaller States to support private hospital sectors. The ACT pointed out that except for the Northern Territory, it had the lowest proportion of total acute separations provided through private hospitals. It asked that the higher costs of complex cases within small hospital systems, and constraints on the ACT system in operating viable private sector alternatives to public teaching hospitals, should be taken into account through the service delivery scale factor.

221. **Staff proposals.** In Discussion Paper *CGC2002/29 Inpatient Services*, staff proposed that the hospital cost factor should continue to be assessed using the 1999 Review method. Staff were unconvinced that the State arguments necessitated changes to the assessment.

222. **Further State views.** Victoria said a vandalism factor should be assessed. It argued that population concentration and not socio-demographic composition, was the key determinant of vandalism, due to increased anonymity and opportunity. Victoria considered that vandalism of government property was more prevalent in large urban centres than in rural centres across a range of facilities, including health. It proposed that a cost weight of at least 2 should be used to compensate for the higher vandalism costs in urban areas across all assessments where public assets are affected by vandalism.

223. Western Australia said that the factor was inadequate for many reasons, including:

- (i) it was extremely complex, and did not seem sound in principle;
- (ii) it ignored the circumstances (distance, types of services needed, and the availability of private services) that dictated the type of services offered in each region, the extent to which patients were treated in other regions, and the location of the other treatment regions;
- (iii) teaching/research roles of major public hospitals were inappropriately attributed to treatments in the geographical areas in which those institutions were located — it considered these roles should relate to long-term use across the entire State; and

- (iv) there was substitutability between private practitioner services and inpatient services which were not adequately recognised by the 1999 Review methods. For example, due to less contact with private practitioners, Indigenous people in the more remote regions had poorer health status. This resulted in an increased likelihood of hospital admission.

224. Western Australia provided data to show that both MBS and PBS expenses, per patient treated, reduced with increasing remoteness. It said there were considerable disparities in the MBS and PBS expenditures between comparable regions in different States and that these differences in expenditures between regions were a direct measure of the variation in services which the States were left to pick up.

225. Western Australia also said that the supply of general practitioners and specialists varies between States. It said it had a relatively low supply of GPs in both metropolitan and non-metropolitan regions, and that it had a low proportion of hospital clinicians in private hospitals. Western Australia said that its lower level of clinicians is not accounted for in the Commission's method, which assumes that rates in comparable regions are the same across Australia. It said this impacted on the States in two ways:

- (i) the low supply of clinicians was reflected in the low private provision of services which placed additional demand on the public sector; and
- (ii) the State faces difficulties in attracting clinicians to provide services to the same standard as other States. This was reflected in a number of ways, including additional staff costs, overworked clinicians, and a lower standard of services.

226. Western Australia asked that the factor for Inpatient Services be modified to acknowledge that there are variations between States in the level of private provision in metropolitan and in remote areas.

227. The ACT asked the Commission to introduce a service delivery scale factor totalling \$XX million because it faced unavoidable diseconomies of scale in delivering average services to its population and the surrounding regions of New South Wales. It illustrated its argument with the case of its Neonatal Intensive Care Unit (NICU).

228. The ACT acknowledged that there was a lack of literature available on the economically optimal size for a NICU. However, the literature available suggested that XX or XX ventilator beds were economically optimal and a unit of XX to XX beds would accommodate a population base of 620 000 to 1 230 000 people (the ACT inpatient services catchment is approximately 520 000.) Based on this, the ACT considered that its eight-bed unit was an appropriate size.

229. The ACT explained that its NICU faced high fixed costs in providing:

- (i) suitably qualified medical staff in sufficient numbers to provide 24 hour cover seven days a week;

- (ii) a minimum roster of suitably qualified neonatal intensive care nurses;
- (iii) high cost medical equipment; and
- (iv) high pathology and imaging costs.

230. The ACT provided data to show that small volumes of patients accounted for substantial cost disabilities in its NICU. The data indicated that regardless of length of stay, costs were about XX per cent higher than the national average. It noted that the XX per cent higher costs it faced approximated the potential saving in cost per occupied bed day if there were a 50 per cent increase in NICU activity.

231. The ACT also provided data that showed that its neurosurgery and neurology services faced a similar situation.

232. *Analysis — hospital costs.* At the most simple level, hospital costs may be thought of as being affected by:

- (i) patient related influences, including the number of patients, characteristics of the patients and the types of treatments provided them; and
- (ii) non-patient cost influences, including the location of the hospital, its size and a range of overheads associated with the nature of services provided from the hospital.

233. The acute inpatients socio-demographic composition factor is intended to capture the effects of interstate differences in the patient-related costs⁸. This factor takes account of differences in the use of hospital services by Indigenous people compared with non-Indigenous people or by people who live in remote areas compared with people who live in urban areas, regardless of how those differences arise. Thus to the extent that there is greater use of inpatient services arising from influences such as the generally lower availability of GP services in remote areas or the lower use of GP services by Indigenous people it is reflected in the assessment.

234. Many of the issues raised by Western Australia in relation to the effects of Indigenous people and the availability of GPs would be taken into account by this factor. The aspect of the arguments that it does not address is that, for reasons beyond the control

⁸ The socio-demographic composition factor proceeds by:

- (i) deriving Australian average inpatient use rates (by type of treatment) taking account of many patient and population characteristics including age, sex, Indigeneity, cultural and linguistic background and where they live.
- (ii) estimating a notional (standardised) inpatient use pattern for each State by applying the national average use weights to the population of each State (the data on population are disaggregated in a manner consistent with the use rates); and
- (iii) applying Australian average cost weights based on the clinical cost of treatment (including special allowances for the extra costs of Indigeneity and low English fluency) to the notional patient profile for each State.

of the State government, people in a region in a State may use the hospital services at a rate different from the national average. Western Australia provided data on GP numbers and MBS and PBS expenditure by region in each State. That data demonstrated a comparatively low supply of GPs in all regions of Western Australia.

235.The Commission has accepted that the relatively low levels of GP services in remote areas results in higher use of State medical services in those areas, partly because there are no obvious alternatives. However, simple comparisons of GPs per capita or MBS and PBS expenses per capita across metropolitan areas do not clearly demonstrate that there will be offsetting effects on the demand for State hospital services. A low level of GPs per capita in one city compared with another does not automatically imply a level of unmet demand that must be met by the State hospitals. For example, it is possible that there is an element of oversupply of GPs in the other cities.

236.In the absence of compelling evidence to support a case for needs arising from this issue, the Commission is not inclined to depart from its usual process of applying national averages to the circumstances of each State.

237.The hospital costs factor is intended to allow for the effects of the location of the hospital by reference to average costs per inpatient separation in regions. However, to ensure that the assessments are not affected by State policies on the type of services they provide in hospitals in different regions, the analysis is done by dividing hospital costs (adjusted to exclude the effects of the patient characteristics) in each region by the number of inpatients who live in that region, regardless of where they were actually treated⁹. For the 2004 Review, those regions are defined using the ARIA+ classification. A detailed outline of the method used for calculating the hospital costs factor is provided in the 'proposed method and results' section below.

238.By relating the standard cost per patient in each region to each State's population settlement pattern, this process would allow for the material effects of population dispersion and diseconomies of scale arising from differences between States in providing small hospitals in remote areas.

239.To the extent that there are differences between States in the availability and access to inpatient services in different regions they should be captured in the cost of patient transport factor. That factor recognises the costs associated with transporting patients to services that may be located in different regions.

240.In the 1999 Review, the overhead costs due to teaching and research roles of public hospitals were taken into account by the hospital costs factor. In brief, each hospital classified as a teaching hospital (in the National Public Hospital Establishment Data), regardless of their regional location, was given an additional cost weight of 4 per cent. That weight was derived from analyses carried out by New South Wales that showed teaching and research accounted for about 4 per cent of expenditures in mostly metropolitan hospitals. This allowance should capture the material aspects of these types of costs.

⁹ For the purposes of this calculation, patients are classified according to where they live not where they are treated.

241. The Commission accepts that theoretically economies of scale operate in the provision of specialty services. The ACT has provided data for its NICU. The Commission has also considered comparisons of the throughput of inpatients in speciality units in the ACT and similar sized facilities in New South Wales. However, the results did not conclusively show lower throughput in the ACT. It is not clear that the extra costs incurred in the ACT do not reflect ACT policies that differ from the national standard in terms of the services provided, the standard at which they are provided and how they are provided. In general, there is insufficient evidence to conclude whether:

- (i) economies of scale exist in the provision of some or most specialty services; or
- (ii) the impact on State expenditure of any economies of scale are material.

242. **Analysis — vandalism.** Because the hospital costs factor is based on the average cost per inpatient separation in each region, any higher costs arising from vandalism in urban areas relative to other regions, is reflected in the factor. (For example, higher vandalism costs in urban areas would increase the Australian average costs per inpatients in urban areas. Those higher costs are then applied to urban populations in all States.)

243. However, that allowance is based on the assumption that the extent of vandalism is comparable in all major urban areas. Differences in the incidence of vandalism between larger and smaller urban areas are not taken into account. This is different from the education categories where the Commission has accepted that vandalism affects the costs of providing education services in Sydney, Melbourne, Brisbane, Perth and Adelaide at different rates. (It concluded that costs per student were increased by XX per cent in Sydney and Melbourne and XX of a per cent in Brisbane, Perth and Adelaide.) It reached this conclusion after considering information presented to it in workplace discussions and submissions that demonstrated that education facilities are extensively affected by vandalism.

244. So far, however, the Commission has received little evidence that hospital facilities are affected by vandalism to the same extent as education facilities, or that the level of vandalism varies between the major cities. In the absence of such evidence it is difficult to reach conclusions on the conceptual merit of the case or its materiality.

245. **Commission decisions.** The Commission accepts the conceptual case that the region in which a hospital is located can affect the costs for a variety of reasons, including, the need to maintain small hospitals in dispersed small communities. Consequently, interstate differences in population settlement patterns can affect the relative costs of providing acute inpatient services. The 1999 Review assessment of the hospital costs factor indicated that the effects were material. The proposed 2004 Review dispersion factor indicates that one of the influences reflected in the hospital costs factor (the effects of population dispersion) are still material.

246. We are confident that the method used to derive the hospital costs factor is sound. We are thus sufficiently confident that the equalisation outcome is improved by

continuing to assess the hospital costs factor using the existing method. We propose to do so.

247. We accept the conceptual argument that teaching and research services and the provision of very complex treatments increases the overall costs of acute inpatient services. It is also the case that those extra overhead-type costs are not fully reflected in the DRG cost weights. The 1999 Review method contained an allowance for those types of costs. That allowance was assessed as 4 per cent for all teaching hospitals, which is material. The work we have done (outlined below) indicates that the extra costs remain at about the level assessed in the 1999 Review. We consider the effects can be estimated with sufficient confidence. We therefore see no reason not to continue with that allowance, as updated to reflect the latest information.

248. There also appears to be a conceptual case for diseconomies of service delivery scale in the provision of some speciality services. However, insufficient information is available to clearly distinguish between differences in cost due to policy and differences due to disabilities. Thus, we are not presently able to measure the disabilities with confidence. The Commission is therefore currently not inclined to introduce extra allowances for service delivery scale in speciality services. It will, however, review that conclusion if States provide further information.

249. The Commission has accepted the conceptual case that there are relatively greater needs arising from vandalism in the larger cities in relation to education services. The data available in that case indicate that the effects are material. It is possible that the conceptual case also exists for health services. However, insufficient information has been presented to demonstrate a clear case or to indicate that any effects are material. At this stage, the Commission has decided not to make any extra allowance for vandalism in the acute inpatients component. It would review this conclusion if data were made available.

Proposed method and results

250. ***Calculation of hospital costs research and teaching weight.*** The hospital costs factor currently includes a weight to account for higher inpatient separation costs in hospitals that carry out a teaching and research function. In the 1999 Review each hospital classified as a teaching hospital in the National Public Hospital Establishment Data (NPHEd), regardless of its regional location, received an upwards adjustment of its inpatient separation costs by 4 per cent to take into account the extra costs incurred due to carrying out this teaching and research function. The Commission has accepted the case for continuing with this adjustment.

251. The teaching and research weight will be updated for the 2004 Review and States were asked to provide data concerning their costs relating to teaching and research in hospitals. The revision of the weight is examined in Table 12.

Table 12 HOSPITAL COSTS FACTOR TEACHING AND RESEARCH WEIGHT, 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Amount State data returns (\$m)									34
Total hospital expenses (\$m) (From CGC R2004 preliminary standard budget)									14,201
% spent on teaching and research									5.12
Cost per separation in non- teaching hospitals - AIHW (\$)									2,834
Cost per separation in teaching hospitals - AIHW (\$)									2,922
% difference in separation costs									3.01
Cost per separation in non- teaching hospitals - NHCDC (\$)									2,535
Cost per separation in teaching hospitals - NHCDC (\$)									2,747
% difference in separation costs									7.72
Average of AIHW and NHCDC teaching and research weights									
AIHW	3.01%								
NHCDC	7.72%								

(a) The separation costs for both the AIHW and the NHCDC have been casemix adjusted.
Source: Australian Hospital Statistics 2000-01, Table 4.3, pp52 and 53. Australian Institute of Health and Welfare, 2002. National Hospital Costs Data Collection, Cost Report Round 5, 2000-01, Table 2, pp11, Department of Health and Ageing in conjunction with States and Territories, August 2002.

252. Only the three small States provided information on teaching and research costs in hospitals. Their information suggested extra costs of about 5 per cent. This data did not represent a sufficiently large or representative sample to produce a reliable weight.

253. Therefore, two other sources of data (AIHW and NHCDC) were examined. The data from those sources implied extra costs of about 3 and 8 per cent. The Commission decided that the weight for the 1999 Review (4 per cent) would be retained because it was derived from analyses carried out by New South Wales that showed teaching and research accounted for about XX per cent of expenditures in mostly metropolitan hospitals. It was also consistent with the range of the alternative sources of more recent data.

254. **Hospital costs factor calculation.** The hospital costs factor will be calculated in the following way.

- (i) The average costs per inpatient separation for hospitals in each ARIA+ region will be calculated. Data will be derived from the National Public Hospital Establishments Dataset (NPHEd).
- (ii) The average Diagnosis Related Group (DRG) cost weight for each region will be calculated. Data on DRG cost weights will be derived from the National Hospital Morbidity Dataset.
- (iii) The average cost per inpatient separation (for each region) will be divided by the average DRG cost weight for each region (ie, (i) divided by (ii)). This has the effect of removing the effect of clinical complexity, as this is already taken into consideration in the socio-demographic composition factors. The resulting ratios (for each region) are averaged to obtain a national average relative cost index (RCI).
- (iv) The level of inpatient demand by region is then derived. In this case, region is classed as the location of the inpatients usual residence, not the location of the hospital where they were treated. (This ensures that needs are attributed to location of patient residence instead of hospital location, which could be policy influenced.)

Inpatient demand is derived by calculating the standardised demand for acute inpatient services, using the same method as outlined for the acute inpatients socio-demographic composition factor. However in this case, no cost weights (DRG, Indigenous, outlier, CALD and private patient cost weights) are applied to the acute inpatient population. This is to avoid double-counting those effects.

- (v) The figures derived for inpatient demand in each State region are weighted by the national average RCIs. In doing this, the demand for inpatient services are weighted by the relative costs in each region. For example, if there was an inpatient demand of 100 separations in State A, region 3, and the national average RCI weight for region 3 is 1.22, then the number of separations for State A, region 3, is increased to 122. In effect, the increase in separation numbers is a proxy for increased needs in treating patients in region 3.
- (vi) The RCI weighted inpatient demand is divided by the unweighted RCI inpatient demand. The resulting ratio is the assessed level of need a State requires to treat inpatients in the different State regions.
- (vii) The ratio for each State is divided by the Australian ratio to obtain a raw hospital costs factor.

255.2004 Review preliminary factor calculation. The NPHEd data, containing ARIA+ region classifications, needed to calculate the 2004 Review preliminary hospital costs factor were not available in time to be included in the Commission's preliminary

calculations. The preliminary calculations have used the factor calculated for the 2003 Update. The figures will be updated when the latest data are available.

256.*Updateability.* We propose to update the hospital costs factors annually.

INPUT COSTS

Input costs —acute inpatients component

257.*1999 Review.* The following standard expense proportions were applied to each of the factors assessed for this component:

- wages and salaries 70 per cent;
- accommodation 2 per cent; and
- electricity 1 per cent.

258.*2004 Review.* The input costs factors for the acute inpatients component of this category, shown in Table 13, have been calculated according to the general method outlined in *Discussion Paper CGC 2003/04 Input Costs* and in *Draft Assessment Paper CGC 2003/79 Input Costs – Electricity and Accommodation*. The standard expense proportions applied were 70 per cent for wages and salaries, 2 per cent for accommodation and 1 per cent for electricity.

Table 13 INPUT COSTS FACTORS — ACUTE INPATIENTS COMPONENT

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 Update								
1997-98	1.01299	0.99664	0.98125	1.01030	0.98257	0.98959	1.01954	1.01994
1998-99	1.01381	0.99748	0.98080	1.00896	0.98071	0.98812	1.01891	1.01172
1999-2000	1.01440	0.99669	0.98152	1.00990	0.98051	0.98210	1.01849	1.00626
2000-01	1.01524	0.99786	0.98038	1.00867	0.97907	0.98018	1.01813	0.99824
2001-02	1.01745	1.00073	0.97629	1.00447	0.97700	0.97732	1.01794	0.99456
2004 Review								
1997-98	1.02716	0.98914	0.98443	0.98482	0.97724	0.93927	1.00702	1.10302
1998-99	1.02875	0.99001	0.98274	0.98179	0.97556	0.93713	1.01075	1.09900
1999-2000	1.03119	0.98927	0.98023	0.98353	0.97245	0.93132	1.01458	1.09491
2000-01	1.03169	0.99049	0.97857	0.98348	0.97140	0.92882	1.01390	1.09256
2001-02	1.03077	0.99148	0.97746	0.98444	0.97488	0.92856	1.01130	1.08952

NON-ACUTE INPATIENTS COMPONENT

259. In the 1999 Review, a separate component was created for non-acute inpatient services to acknowledge that funding for these services was carried out in a different manner from acute inpatient services.

260. The factors assessed in the non-acute inpatients component were the same as those in the acute inpatients component. They were:

- (i) socio-demographic composition;
- (ii) hospital costs; and
- (iii) input costs.

261. The difference between the acute and non-acute inpatient components was the assessment method for the socio-demographic composition factor. In the 1999 Review, the hospital costs and inputs costs factors assessed in the acute inpatients component were also applied in the non-acute inpatients component. This was because it was considered that the influences on the relative costs of the States reflected in those factors were also relevant to the non-acute inpatient population.

262. There is no reason to consider the situation has changed. We propose to apply the 2004 Review hospital costs and input costs factors assessed for acute inpatients in this component.

SOCIO-DEMOGRAPHIC COMPOSITION

263. **1999 Review.** The non-acute inpatient component socio-demographic composition factor used bed days as the measure of unit costs instead of DRG cost weights. Because DRG cost weights were not used in this component, the outlier adjustment, which was directly associated with DRG cost weights, was not applied. All other aspects of the factor were assessed in the same way as the acute inpatients component.

264. The socio-demographic composition factor in the non-acute inpatients component took into account use rates (bed days) and cost for the same population groups as the acute inpatients component. These were groups cross-classified by:

- (i) age (use rate and cost per unit weights were applied);
- (ii) sex (use rate and cost per unit weights were applied);
- (iii) Indigeneity (use rates and cost per unit weights were applied);

- (iv) people from non-English speaking backgrounds (use rates and cost per unit weights were applied);
- (v) low English fluency / CALD (only a cost per unit weight was applied);
- (vi) population location (use rates and cost per unit weights were applied);
and
- (vii) socio-economic status (use weights only were applied).

265. The adjustments applied in deriving the cost weights for the non-acute inpatients component were:

- (i) the Indigeneity cost adjustment — to reflect the extra costs of servicing Indigenous inpatients; and
- (ii) the private patients cost adjustment — to reflect the lower costs of servicing private inpatients in public hospitals.

266. **Preliminary State views.** The issue of nursing home type patients (NHTPs) was raised by four States. Western Australia noted that it had NHTPs in its rural and remote public hospitals. Tasmania said that its number of NHTP beds had increased XX per cent in the past 12 months. In addition, patient stays longer than XX days had increased by XX per cent. It also said Royal Hobart Hospital had XX NHTPs and had to rent beds in private hospitals. Launceston General Hospital had XX NHTPs (out of XX hospital beds). Half of these patients would go to nursing homes if beds were available, and half would go home, supported by community health care if those services were available. The ACT said that it had a high proportion of NHTPs in the hospital system. States were concerned that their costs were not adequately being recognised. South Australia sought clarification on whether NHTP expenses would be included in the Inpatient Services category.

267. The States did not raise any other issues concerning the non-acute socio-demographic composition, hospital cost or inputs costs factors that were specifically related to the non-acute inpatient expenditure.

268. **Staff proposals.** Staff proposed that the Commission continue to assess NHTPs in this component, using the same approach as was adopted in the 1999 Review.

269. **Further State views.** No State opposed that proposal in their rejoinder submission.

270. **Analysis.** In the 1999 Review, inpatients classed as NHTPs were included in the non-acute inpatients component. This was because, as a standard policy, States fund NHTP episodes on a per bed day basis, the same as for non-acute general inpatients. It was thus reasonable to assume that the socio-demographic composition disability variables used to assess costs and use in the non-acute inpatient component were also relevant to the NHTP inpatient population.

271.As States are still incurring costs due to NHTPs, and there are consistent and reliable data available to assess them, we consider there is a case to continue including them in the non-acute inpatient population in the 2004 Review.

272.**Commission decisions.** The Commission accepts that a conceptual case exists for assessing needs for non-acute inpatient services. In particular:

- (i) there is a conceptual case for assessing a socio-demographic composition factor in the non-acute inpatients component as the use and unit costs of non-acute inpatient services are influenced by the characteristics of State populations. The Commission considers those influences are material, and data to measure differences between States, to a high level of confidence, are available. The Commission notes that States also support the current method of assessment. The low income, Indigeneity and private patient weights that are used in the acute inpatients assessment will also be use in the non-acute inpatients assessment. A CALD weight, similar to the acute inpatients component, will also be applied;
- (ii) there is a conceptual case for continuing to assess NHTPs in the non-acute inpatient component. There are consistent and reliable data available for assessing NHTPs. Therefore, the Commission proposes to continue to assess NHTPs using the same approach adopted in the 1999 Review; and
- (iii) inpatients in designated psychiatric wards and psychiatric institutions will be included in the non-acute inpatient population.

273.**Proposed method and results.** The Commission will calculate the 2004 Review non-acute inpatient socio-demographic composition factor using a similar method to that used in the 1999 Review.

274.Use rates will be calculated for all non-acute inpatients and all mental health classified inpatients grouped by:

- (i) age;
- (ii) sex;
- (iii) Indigeneity;
- (iv) people from non-English speaking backgrounds;
- (v) low English fluency / CALD;
- (vi) population location; and
- (vii) socio-economic status.

275. Two adjustments will be applied to the cost weight (to be measured in terms of bed days). They are:

- (i) Indigeneity cost adjustment; and
- (ii) private patients cost adjustment.

276. The factor calculation will involve the same steps as outlined in the acute inpatients component.

277. 2004 Review preliminary factor calculation. The NHMD data, containing ARIA+ region classifications, needed to calculate the 2004 Review preliminary non-acute inpatients socio-demographic composition factor were not available in time to be included in these preliminary calculations. The calculations will be updated when data become available.

278. Updateability. As with the comparable factor in the acute patients component, the data are available to update this factor annually.

HOSPITAL COSTS

279. In the 1999 Review, the hospital costs factor assessed in the acute inpatients component was also applied in the non-acute inpatients component. This was because it was considered that the types of costs assessed by the factor were also relevant to the non-acute inpatient population.

280. Preliminary State views. No State views were raised in the original submissions, specifically concerning the assessment of the hospital costs factor in the non-acute inpatients component.

281. Staff proposals. In Discussion Paper *CGC2002/29 Inpatient Services*, staff proposed that the hospital costs factor continue to be assessed in the non-acute inpatients component in the 2004 Review.

282. Further State views. No State views were raised in the, rejoinder submission or bilaterals specifically concerning the assessment of the hospital costs factor in the non-acute inpatients component.

283. Commission decision. The Commission considers there is a conceptual case to continue assessing the hospital costs factor in the non-acute inpatients component. The assessment has a material impact and data to measure these differences by State, to a high level of confidence, are available. States have also broadly supported the method of assessment. Therefore, the Commission has decided to continue assessing the hospital costs factor in the non-acute inpatients component in the 2004 Review.

284. Proposed method and results. The hospital costs factor will be calculated using the same method as outlined in the acute inpatient component.

285.**Updateability.** Issues relating to updateability were outlined in the acute inpatients component. The findings presented in the acute inpatients component also apply to the non-acute inpatients component.

INPUT COSTS

Input costs —non-acute inpatients component

286.**1999 Review.** The following standard expense proportions were applied to each of the factors assessed for this component:

- (i) wages and salaries 70 per cent;
- (ii) accommodation 2 per cent; and
- (iii) electricity 1 per cent.

287.**2004 Review.** The input costs factors for the non-acute inpatients component of this category, shown in Table 13, have been calculated according to the general method outlined in *Discussion Paper CGC 2003/04 Input Costs* and in *Draft Assessment Paper CGC 2003/79 Input Costs – Electricity and Accommodation*. The standard expense proportions applied were 70 per cent for wages and salaries, 2 per cent for accommodation and 1 per cent for electricity.

288.The inputs costs factors shown in Table 13 were also applied in this component.

COST OF PATIENT TRANSPORT COMPONENT

289.**1999 Review.** A cost of patient transport factor was assessed in the 1999 Review to take into account the differential costs incurred by States due to their intrastate transport of patients.

290.While expenditure on patient transport relates to all health services, the bulk of it falls within the scope of hospitals. The 1999 Review factor covered expenses relating to patient transport for:

- (i) emergency transport to hospital;
- (ii) inter-hospital transport;
- (iii) non-emergency transport to and from treatment centres;
- (iv) travel and accommodation assistance; and

- (v) expenses on the Royal Flying Doctor Service (RFDS) and the Isolated Patients Travel and Accommodation Assistance Scheme (IPTAAS).

291. These expenses related to intrastate travel. The isolation factor covered expenses incurred on interstate patient travel.

292. The cost of patient transport was measured using the general dispersion method which captured three types of travel:

- (i) air travel between regional centres and capital cities for distances over 250 kms;
- (ii) inter-regional travel between regional centres and capital cities for distances less than 250 kms; and
- (iii) local travel to and from and within the nearest urban centre of 1000 or more population.

293. In the 1999 Review, data indicated that the costs of air travel accounted for about 50 per cent of total patient travel costs. The other 50 per cent was assumed to be evenly split between the inter-regional travel and local travel.

294. ***Preliminary State views.*** New South Wales said that telehealth provided a means to improve health care service delivery, particularly in rural and remote communities, while at the same time achieving cost savings. It said that the Commission should review its loadings for travel in the isolation and dispersion factors, given the cost effectiveness and savings achievable in health administration, education and service delivery.

295. Victoria also said that the use of telemedicine could produce significant cost savings. It said that the cost weights for inter-regional travel, air travel and the patient transfer scheme should be reduced by 10 per cent to allow for the take-up of telehealth.

296. Western Australia argued that despite all the technological advances, dispersion-related costs across the full range of essential State services remain very real. It noted that the Western Australia Department of Health was making increased use of telehealth for doctors to confer with specialists when making diagnoses, and to support doctors in remote regions. Technology was being used to address unmet need in regions that previously received lower standards of service. Western Australia said that telehealth resulted in better diagnoses, which increased the demand for health treatments, resulting in higher costs to the States. In effect, the technology was facilitating improved services across the State, but at significant additional expense.

297. Tasmania said that video-conferencing and telehealth had enabled savings in relation to staff travel and accommodation as well as the travel and accommodation costs for patients. It had also improved the quality of service delivered to people in rural areas. However, administrative costs had increased.

298. Tasmania also said that although the technology was available, line rental costs were high. This significantly offset savings made in travel costs (and the number of people

using the services). It also stated that costs were being shifted to the State as Medicare did not reimburse non face-to-face consultations with specialists.

299. Tasmania also stated that specialist acute services were only provided in Hobart. Therefore, all other patients, whether public or private, needed to be transported to these units. The State effectively subsidised privately insured patients which represented a significant cost to the State health system.

300. The Northern Territory strongly supported maintaining the cost of patient transport assessment. It questioned, however, whether the Commission took into account associated costs of patient transport such as providing accommodation for patients and patient escorts, and loss of productivity if a proposed transport could not occur due to environmental conditions.

301. **Staff proposals.** Discussion Paper, CGC 2002/7, Implications for Assessments of Developments in Technology and Public Administration Practice, sets out the thinking of Commission staff on the effects of technology on all State services.

302. Costs in the patient transport factor are based on the national averages of the States' actual expenditure on patient transport as a proportion of total expenses. The effects of changes in technology on the costs of providing services should, therefore, be reflected in the updating of those cost weights.

303. In relation to the Northern Territory's concerns, the cost of patient transport assessment includes the costs of the three types of travel, as outlined above. The weights of these components were determined using data provided by States on their actual costs and demand for each type of travel. Costs for the Isolated Patients Travel and Accommodation Assistance Scheme (IPTAAS) were included. Costs relating to patient accommodation and other related issues should be reflected in the weights.

304. In the 1999 Review, the expenses for the RFDS and IPTAAS were not separately identified in the ABS GPC data, so expenses for these services were sought directly from States. Updated data were sought as part of the dispersion factor special data requests.

305. In the 1999 Review, adjustments were made to the data provided by States on travel costs to account for unproductive travel time (UTT) in some of the patient transport components. They were:

- (i) the inter-regional travel costs reported by States were increased by 50 per cent on the basis of judgement; and
- (ii) the air travel costs reported by States were increased by 5 per cent on the basis of judgement to reflect indirect and hidden costs.

306. State policies differ on the provision of emergency patient transport (eg, emergency ambulance travel). Typically, a person is required to pay for emergency transport to hospital in an ambulance, but there are State variations to this rule. For example:

- (i) in Tasmania, this service is provided free to most of the population;
- (ii) in New South Wales and the ACT, hospital insurance cover includes an ambulance levy. People with this type of hospital insurance are entitled to ambulance services without charge. Those who hold Centrelink cards may also be exempt from the ambulance levy; and
- (iii) in Queensland, those who hold pensioners and seniors cards, and their dependants, are entitled to free ambulance cover.

307. For the majority of States, emergency ambulance transport is paid for by the user. The Commission has concluded that it is standard policy for costs of the provision of emergency transport or private patients to hospitals to be recovered from users. There is therefore no conceptual case to assess a disability for this cost.

308. **Further State views.** Victoria restated its view that the dispersion-related costs embedded in the acute and non-acute inpatient services expenditure components and the dispersion-related components applying to the patient transfer scheme should be discounted by 10 per cent.

309. **Analysis.** The Commission has examined the effects of technology on State costs¹⁰. In brief, it concluded that the effects of technology should be reflected in the air travel and inter-regional travel components. This was done by reducing the weights applied to the air and inter-regional travel components to reflect the reduction in travel due to increased use of technology.

310. **Commission decision.** The Commission considers that a conceptual case exists for assessing the cost of patient transport. This is because the differences in the settlement patterns of the States result in them incurring differential costs in the provision of patient transport services. The Commission considers that the assessment has a material impact, and data to measure differences by State, to a high level of confidence, are available.

311. In its reconsideration of dispersion costs, the Commission concluded that there was not a strong conceptual case for allowances for unproductive travel time.

312. The Commission proposes that the 2004 Review cost of patient transport factor be calculated using the general method outlined in *Discussion Paper CGC2003/63, Dispersion*.

313. **Proposed method and results.** The 2004 Review cost of patient transport component will cover expenses relating to patient transport for:

- (i) emergency transport to hospital;
- (ii) inter-hospital transport;
- (iii) non-emergency transport to and from treatment centres;

¹⁰ Please see *Discussion Paper, CGC 2003/8, Implications of Technology on Assessments*.

- (iv) travel and accommodation assistance; and
- (v) expenses on the royal flying doctor service (RFDS) and the Isolated Patients Travel and Accommodation Assistance Scheme (IPTAAS).

314. These expenses relate to intrastate travel. The isolation factor will cover expenses incurred on interstate patient travel.

315. The cost of patient transport factor will be calculated using the general method outlined in *Discussion Paper CGC2003/63, Dispersion*. It will capture interstate differences in costs relating to three types of travel:

- (i) air travel between regional centres and capital cities for distances over 250 kms;
- (ii) inter-regional travel between regional centres and capital cities for distances less than 250 kms; and
- (iii) local travel to and from and within the nearest urban centre of 1000 or more population.

316. In deriving the factor, the costs of the patient travel component were allocated to the three types of travel in the proportions 50, 25 and 25 per cent, respectively. Those weights have been updated for the 2004 Review. The calculation of the updated weights of 40, 30 and 30 per cent is shown in Table 14.

Table 14 WEIGHTS FOR AIR, INTER-REGIONAL AND LOCAL COST OF PATIENT TRANSPORT

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Amount spent on air travel - from State data returns (\$000)									62,042
Amount spent on patient transport (IPTAAS) - from State data returns (\$000)									58,748
Amount spent on patient transport – AIHW (\$000) ^(a)									98,727
AIHW + IPTAAS amounts									157,475
% spent on air travel									39
Travel weight for air travel: 39%									
The remaining percentage was distributed equally between inter-regional and local travel:									
Inter-regional travel weight : 30%									
Local Travel weight : 30%									

(a) Patient transport data were obtained from the 2000-01 Australian Hospital Statistics, Table 3.5, pp33. Australian Institute of Health and Welfare (2002). The data indicate the direct cost of transporting patients excluding wages and salaries of transport staff, National Health Data Dictionary (2001) Version 10 pp 234. As the Isolated Patients Travel and Accommodation Assistance Scheme (IPTAAS) data from State data returns were not

included in the AIHW patient transport data, they were added in. ABS GPC (2534) data were not used as it was not clear if similar expenses were included for each State.

317. The effect of technology on the costs of providing air travel and inter-regional travel will also be taken into account as outlined in the *Discussion Paper, CGC 2003/8, Implications of Technology on Assessments*.

318. The 2004 Review (preliminary) cost of patient transport factors are shown in Table 15.

Table 15 2004 REVIEW PRELIMINARY COST OF PATIENT TRANSPORT FACTOR

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
2003 Update									
1997-98	0.90537	0.46687	1.63026	1.61915	0.70778	0.63365	0.31397	3.77206	1.00000
1998-99	0.90537	0.46687	1.63026	1.61915	0.70778	0.63365	0.31397	3.77206	1.00000
1999-2000	0.90537	0.46687	1.63026	1.61915	0.70778	0.63365	0.31397	3.77206	1.00000
2000-01	0.90537	0.46687	1.63026	1.61915	0.70778	0.63365	0.31397	3.77206	1.00000
2001-02	0.90537	0.46687	1.63026	1.61915	0.70778	0.63365	0.31397	3.77206	1.00000
2004 Review (preliminary)									
1997-98	0.93881	0.61641	1.56356	1.19936	0.85240	0.78221	0.19182	3.33854	1.00000
1998-99	0.93792	0.61583	1.56208	1.19822	0.85159	0.78147	0.19164	3.33538	1.00000
1999-2000	0.93715	0.61532	1.56080	1.19724	0.85089	0.78083	0.19148	3.33263	1.00000
2000-01	0.93647	0.61488	1.55967	1.19637	0.85028	0.78027	0.19134	3.33022	1.00000
2001-02	0.93586	0.61447	1.55864	1.19559	0.84972	0.77975	0.19122	3.32803	1.00000

ISOLATION COMPONENT

319. **1999 Review.** The isolation factor was assessed to account for differences in per capita costs of service provision for some States because of their economic and geographical isolation from the main interstate sources of supply in South Eastern Australia. It reflected the combined effect of isolation on labour-related costs, interstate freight costs, professional infrastructure costs, commercial goods costs, airfares, travel allowances and other travel-related subsidies. The isolation-affected expenses component represented 0.29 per cent of expenses in this category.

320.**State views.** State views were summarised in *Discussion Paper CGC2002/29, Inpatient Services*. In brief, Tasmania stated that the proportion of Hospital expenses (0.29 per cent) applied to isolation was too low. The ACT requested that a professional isolation factor be assessed to reflect the costs it faced in recruiting staff. The recruitment and retention of staff in rural and remote areas were raised by Queensland, Western Australia, Tasmania and the Northern Territory.

321.**Staff proposals.** Staff proposed that:

- (i) the higher costs of recruitment and retention in rural and remote areas of States would be discussed in *Discussion Paper CGC2002/22, Dispersion*; and
- (ii) costs of interstate recruitment and retention of staff would be explored as part of the 2004 Review of the isolation assessment.

322.**Further State views.** The ACT reiterated that a professional isolation factor be assessed to reflect the costs it faced in recruiting staff.

323.**Analysis.** *Draft Assessment Paper CGC 2003/63 Dispersion*, discusses the issue of costs of recruitment and retention in rural and remote areas. *Draft Assessment Paper CGC 2003/65 Isolation* discusses the issues raised by the States regarding the assessment of isolation. The paper sets out the Commission's decisions on the general method of assessment adopted for the 2004 Review and on the size of the isolation-affected expenses component for relevant categories. The paper also examines the ACT's request.

324.**Commission decisions.** Commission decisions concerning the recruitment and retention in rural and remote areas are outlined in *Draft Assessment Paper CGC 2003/63 Dispersion*. In brief, the Commission decided that the data demonstrated that there were some extra costs which were not previously considered as dispersion-affected costs which were affected by remoteness and distance (or in the case of telecommunications developments in modes of services). It considered that a conceptual case exists for extending the scope of the remote removals to include the costs of staff recruitment and training. It has done so.

325.The paper also examined the case for increasing the scope of the locality allowance component of the dispersion-affected costs to cover the extra costs some States incur in seeking to attract staff to hard to staff areas, which are characterised by high levels of staff turnover. The Commission concluded that there was a conceptual case for doing so. However, the available data indicated that the effects would be negligible. The Commission decided not to broaden the scope of the locality allowances at this stage.

326.Commission decisions concerning the isolation factor are outlined in *Draft Assessment Paper CGC 2003/65 Isolation*.

327.In brief, while sympathetic to the position of the ACT regarding the difficulties it faced in attracting and retaining specialists medical officers, the Commission proposed not to assess a labour-related isolation cost element for the ACT in the 2004 Review.

328.**Proposed method and results.** The isolation factors for this category, shown in Table 16, have been calculated according to the general method outlined in Draft Assessment Paper 2003/65 *Isolation*. Isolation-affected expenses for this category have been estimated to be 0.12 per cent of the category standard.

Table 16 ISOLATION FACTORS — ISOLATION-AFFECTED EXPENSES COMPONENT

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 Update	0.03819	0.06197	0.11236	2.40453	0.28781	3.92447	1.17836	56.74472
2004 Review	0.05107	0.10737	0.17783	0.74776	0.56469	3.49490	1.51842	68.27218

PROPOSED ASSESSMENT FOR THE 2004 REVIEW - EXPENSES

329.**Summary of changes.** The changes in the Inpatient Services assessment proposed for the 2004 Review are as follows.

- (i) The inclusion of expenses for inpatients in designated psychiatric wards and inpatients in psychiatric institutions in the non-acute component of the category.
- (ii) The ARIA+ classification will be used in the acute and non-acute socio-demographic composition factors and the hospital costs factor (instead of the Rural, Remote, Metropolitan Areas (RRMA) classification). Discussion Paper, 2003/63 *Dispersion*, outlines the issues involved in changing to the Remoteness Area regional classifications.
- (iii) A CALD weight and cost weighted use rates for people born in non-English speaking countries will be applied to the socio-demographic composition factors. The CALD weight will include costs for provision of both interpreter and ethnic health worker services for inpatients. However, the data to include the use weights were not available in time for them to be included in the preliminary calculations shown in this paper.
- (iv) The low income weights will be updated in both the acute and non-acute socio-demographic composition factors.
- (v) The Indigenous cost weights in the acute inpatient component will only be discounted by 50 per cent for Indigenous inpatients that are outliers.

- (vi) The private patient discount will change from 12 per cent to 9 per cent.
- (viii) the HIV/AIDS and drugs adjustment for New South Wales and the renal dialysis adjustment for the Northern Territory will not be continued.

330. The National Public Hospital Morbidity Data (used to calculate the socio-demographic composition factors) and the National Public Hospital Establishment Data (used to calculate the hospital costs factor) including ARIA+ regional coding were not available in time to be included in the preliminary calculation results. The preliminary calculations will use the 2003 Update factors for the acute and non-acute inpatient socio-demographic composition factors and the hospital costs factor.

331. Table 17 summarises the proposed assessment structure for the 2004 Review.

Table 17 INPATIENT SERVICES PROPOSED ASSESSMENT STRUCTURE, 2004 REVIEW

Expense component	Component weight	Factors	Basis of calculation
	%		
Fixed costs expenditure	0.44	Input costs	General method with weights of 80 % for wages, 2 % accommodation and 1% electricity to be determined.
		Administrative scale	General method.
Acute inpatient services	84.71	Socio-demographic composition	Cost weighted utilisation rates by age, sex, Indigeneity, socio-economic status, region and low English fluency derived from National Hospital Morbidity Data, and 2001 Census of Population data.
		Hospital costs	Based on the average cost of treatment by region to account for dispersion, service delivery scale and teaching & research & extraordinary case complexity.
		Input costs	General method with weights of 70% for wages, 2% accommodation and 1% electricity to be determined.
Non-acute inpatient services including all mental health inpatients	13.23	Socio-demographic composition	Bed day rates by age, sex, Indigeneity, socio-economic status, region and low English fluency derived from National Hospital Morbidity Data, and 2001 Census of Population data.
		Hospital costs	Based on the average cost of treatment by region to account for dispersion, service delivery scale and teaching & research and extraordinary case complexity.
		Input costs	General method with weights of 70% for wages, 2 % accommodation and 1% electricity to be determined.
Cost of patient transport	1.49	Cost of patient transport	Based on the general dispersion method for air travel, inter-regional travel and local travel.
Isolation	0.12	Isolation	General method.

Calculating the category factor

332. Table 18 summarises the components, component weights and disability factors assessed for this category for 2004 preliminary calculations. It also shows the calculation of the category factor.

Table 18 INPATIENT SERVICE —DERIVATION OF THE CATEGORY FACTOR FOR 2004 REVIEW PRELIMINARY CALCULATIONS

Factors	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Fixed Costs	0.44%							
Administrative Scale Factor	0.34013	0.46524	0.61538	1.17754	1.48735	4.77358	7.00016	18.94453
Fixed Costs Input Costs Factor	1.03498	0.99044	0.97446	0.98186	0.97135	0.92001	1.01306	1.09897
Component factor	0.34992	0.45804	0.59609	1.14927	1.43611	4.36551	7.04923	20.69514
Cont. to category factor	0.00154	0.00202	0.00262	0.00506	0.00632	0.01921	0.03102	0.09106
Acute Inpatients	84.71%							
Hospital Costs Factor	0.99438	0.99855	0.99231	1.02327	1.00562	0.97679	1.01848	1.12220
Socio-demographic Composition -	0.99177	0.97071	1.01366	0.99512	1.06260	1.11217	0.75430	1.43624
Input Costs - acute inpatients	1.03077	0.99148	0.97746	0.98444	0.97488	0.92856	1.01130	1.08952
Component factor	1.01645	0.96095	0.98325	1.00249	1.04133	1.01111	0.78147	1.69788
Cont. to category factor	0.86104	0.81402	0.83291	0.84921	0.88211	0.85651	0.66198	1.43827
Non-acute Inpatients	13.23%							
Hospital Costs Factor	0.99438	0.99855	0.99231	1.02327	1.00562	0.97679	1.01848	1.12220
Socio-demographic Composition -	0.98247	1.02134	0.97633	0.91418	1.21610	1.25748	0.56420	0.77443
Input Costs - non-acute inpatients	1.03077	0.99148	0.97746	0.98444	0.97488	0.92856	1.01130	1.08952
Component factor	1.00799	1.01228	0.94782	0.92384	1.19229	1.14731	0.58989	0.97794
Cont. to category factor	0.13336	0.13392	0.12540	0.12222	0.15774	0.15179	0.07804	0.12938
Cost of Patient Transport	1.49%							
Dispersion Factor	0.93586	0.61447	1.55864	1.19559	0.84972	0.77975	0.19122	3.32803
Component factor	0.93586	0.61447	1.55864	1.19559	0.84972	0.77975	0.19122	3.32803
Cont. to category factor	0.01394	0.00916	0.02322	0.01781	0.01266	0.01162	0.00285	0.04959
Isolation	0.12%							
Isolation Factor	0.05107	0.10737	0.17783	0.74776	0.56469	3.49490	1.51842	68.27218
Component factor	0.05107	0.10737	0.17783	0.74776	0.56469	3.49490	1.51842	68.27218
Cont. to category factor	0.00006	0.00013	0.00021	0.00090	0.00068	0.00419	0.00182	0.08193
CATEGORY FACTOR	1.00994	0.95925	0.98437	0.99520	1.05950	1.04332	0.77572	1.79023

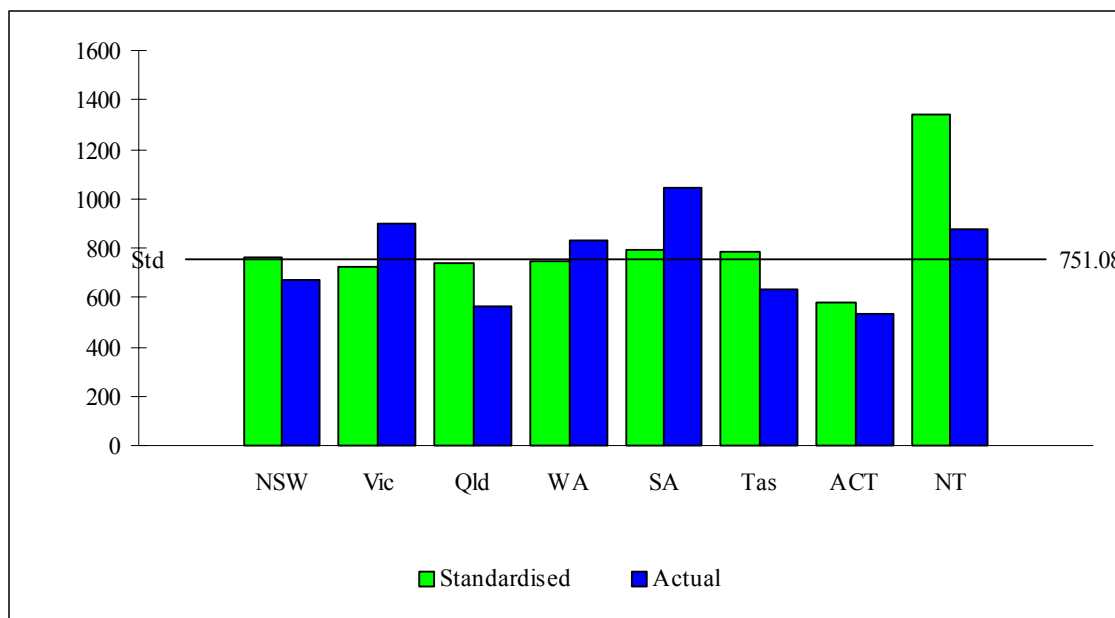
333. The following formulas were used to calculate the contribution of each expense component to the overall category factor. In each case, the contributions are calculated as the expense component multiplied by the component factor (the bracketed terms in the formulas). Each contribution to category factor was rescaled to ensure that the sum of standardised equals the sum of actual expenses.

$$\begin{aligned}
 \text{SAE} &= 0.0044 * (\text{ic_sae} * s) \\
 \text{AINP} &= 0.8471 * [(\text{hc} + \text{sdc_ainp} - 1) * \text{ic_oth}] \\
 \text{NAINP} &= 0.1323 * [(\text{hc} + \text{sdc_nainp} - 1) * \text{ic_oth}] \\
 \text{CPT} &= 0.0149 * (\text{cpt}) \\
 \text{ISO} &= 0.0012 * (\text{iso})
 \end{aligned}$$

$$\text{Category Factor} = \text{SAE} + \text{AINP} + \text{NAINP} + \text{CPT} + \text{ISO}$$

334. Figure 1 shows the gross expenses per capita for 2001-02 in terms of standardised, estimated and gross standard expenses.

Figure 1 INPATIENT SERVICES—GROSS EXPENSES PER CAPITA—STANDARDISED, ESTIMATED AND STANDARD, 2004 REVIEW PRELIMINARY CALCULATIONS



Comparison of category factors

335. Table 19 shows the category factors calculated for the 2004 Review draft assessments compared with those assessed for this category in the 2003 Update.

Table 19 COMPARISON OF CATEGORY FACTORS, 2003 UPDATE AND THE DRAFT ASSESSMENT FOR THE 2004 REVIEW

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 Update	0.99577	0.96192	0.98529	1.03139	1.05093	1.09528	0.79915	1.74578
Draft Assessment - 2004 Review	1.00994	0.95925	0.98437	0.99520	1.05950	1.04332	0.77572	1.79023

Standardised expenses

336. Table 20 shows the standardised expenses for this category for 2001-02 in the draft assessment compared with those assessed in the 2003 Update.

Table 20 ESTIMATED, STANDARD AND STANDARDISED EXPENSES, 2001-02

	Standard	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 Update -									
Estimated expenses									
\$m	13,142	4,601	3,337	2,163	1,219	1,200	284	160	179
\$ per capita	670.55	692.87	687.25	589.30	635.32	790.08	599.90	496.42	893.47
Standardised expenses									
\$m	13,142	4,434	3,132	2,425	1,327	1,070	348	173	234
\$ per capita	670.55	667.71	645.02	660.69	691.60	704.70	734.44	535.87	1170.63
2004 Review									
Estimated expenses									
\$m	14,722	4,467	4,368	2,071	1,589	1,581	300	171	175
\$ per capita	751.15	672.61	899.72	564.14	828.42	1041.24	634.32	530.66	873.04
Standardised expenses									
\$m	14,720	5,038	3,498	2,714	1,434	1,209	371	188	269
\$ per capita	751.08	758.62	720.54	739.41	747.55	795.85	783.69	582.68	1,344.73

Effect of assessment on grants

337. Table 21 shows the redistribution of grants resulting from the assessment in the 2003 Update and in the draft assessment for the 2004 Review.

338. Compared to an equal per capita assessment, the draft assessment redistributed \$103 million away from Victoria, Western Australia, Tasmania and the ACT to the other States, \$41.7 million more than in the 2003 Update.

339. The main reasons for the change in grants were:

- (i) The updated input cost factor accounted for about 80 per cent of the change. The fixed costs, cost of patient transport and isolation factors were also updated to reflect 2004 Review methodologies. However, the effects of updating these factors were small.
- (ii) The 2003 Update category component weights were replaced by the 2004 Review category component weights.

340. The National Hospital Morbidity Data and the National Public Hospital Establishment Data containing the ARIA+ regional coding were not available in time to update the acute and non-acute socio-demographic composition factors and the hospital costs factor. Therefore, the 2003 Update factors were used in the 2004 Review preliminary calculations.

Table 21 EFFECT OF ASSESSMENT ON GRANT DISTRIBUTION —
INPATIENT SERVICES

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total ^(a)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Contribution to 2003 Update relativities ^(b)	-8.2	-126.0	-52.3	35.0	62.4	27.8	-44.4	105.8	230.9
Contribution to 2004 Review draft assessments relativities ^(b)	69.0	-140.9	-50.5	-25.9	75.0	11.4	-55.3	117.1	272.6
Total change	77.2	-14.9	1.8	-60.9	12.7	-16.4	-10.9	11.3	103.0 ^(c)

(a) Total redistribution.

(b) Assuming same pool and a constant population.

(c) This figure shows the change in the amount redistributed among the States between the 2003 Update and the 2004 Review Draft Assessment. It does not necessarily equal the difference in the total contributions to the relativities between the two inquiries.

USER CHARGES

341.**1999 Review.** The user charges category comprised all user charges other than those in the Hospital Patient Fees category. In the 1999 Review, user charges were assessed using an equal per capita method.

342. Table 22 shows the hospital user charges assessed in the 2003 Update. The figures presented are actual amounts.

Table 22 HOSPITAL USER CHARGES, 2001-02

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Per capita (\$)	47.40	6.25	34.99	26.06	39.38	4.28	186.08	26.83	33.23
User charges (\$m)	311.28	29.96	126.06	49.34	59.50	2.28	59.42	5.33	-

Source: Commonwealth Grants Commission 2003 Update Working Papers, Vol. 5, pp327 and 332.

343.**State views.** No State commented on the hospital user charges in the first round or rejoinder submissions.

344.**Analysis and Commission decision.** Amounts of hospital user charges raised by States can vary greatly. Differences in State policies and circumstances of individual hospitals will influence the level of money raised by States. Different accounting procedures also affect recorded amounts.

345. The Commission considers that Inpatient Services user charges should be continued to be assessed using an equal per capita method because differences in charges used largely reflect State policy differences.

346.***Proposed method and results.*** As an equal per capita method is proposed, the amounts shown in Table 22 will remain the same. The actual amounts will be distributed on an equal per capita basis. This assessment will have no effect on the relativities.

ATTACHMENT A

1. This attachment provides details of the arguments and analysis relating to a range of additional use rate adjustments, sought by the States, to the acute inpatients socio-demographic composition factor. Those adjustments related to:

- (i) Indigenous use;
- (ii) HIV/AIDS and drugs cases in New South Wales;
- (iii) renal dialysis cases in the Northern Territory; and
- (iv) higher incidence of chronic diseases in the Northern Territory.

Indigenous use

2. Preliminary State views. Western Australia considered that the approach of using national average use rates significantly disadvantaged States with high Indigenous hospital utilisation. It suggested that use rates from each States actual data, or from a combination of northern States' or southern States' data be used.

3. Staff proposals. Commission staff proposed further investigation of the Western Australian suggestions.

4. Further State views. Queensland agreed with Western Australia that the use of Australian average Indigenous use rates disadvantaged those States with higher than average Indigenous use rates. Its preferred method was to treat the northern States and the southern States as two separate groups and determine Indigenous use rates for each of these groups separately.

5. Western Australia and the Northern Territory argued that the Commission should use actual Indigenous and non-Indigenous hospital utilisation rates for each State rather than national average Indigenous use rates. Western Australia noted that admittance to hospitals was governed by national guidelines based on clinical need. Therefore, it argued that there were no policy influences that would explain different Indigenous use rates across States. The Northern Territory said that actual data were likely to reflect necessary use rather than discretionary or over use by Indigenous people.

6. South Australia agreed there was merit in the Commission investigating the suitability of the current method for calculating the Indigenous use factors. However, it was not convinced that any of the options put forward by Western Australia provided a feasible alternative to the current national average based method. It agreed that measures based on actual levels of service provision should be avoided wherever possible due to the difficulty involved in identifying which impacts were the result of genuine disabilities and which were purely policy related.

7. Furthermore, South Australia was not convinced that grouping of northern and southern States had merit. It said this would result in the factor depending on how the States were grouped and may not reflect States' needs. It provided data which showed that the Indigenous hospital utilisation rates in South Australia and the ACT were similar to those experienced in Queensland and Western Australia, despite both of them being presumably classed as southern States.

8. Tasmania stated that it had strong reservations about using actual use rates for Indigenous inpatient separations. It said that it was clear from the Indigenous under-identification data shown in *Discussion Paper CGC2002/29* that the data in all States, except for Western Australia and the Northern Territory, were invalid and unreliable. Tasmania added that any attempt to further adjust for undercount would only serve to exacerbate the shortcomings of the data.

9. *Analysis*. While we acknowledge that Indigenous use rates in certain States are higher than average, it is not evident that a case has been established that their cause is disability driven. In any case, the Commission has explored the issue. States have suggested that the Commission use actual use rates to capture Indigenous use. The Commission does not consider State actual use to be policy neutral. State policies can differ markedly and influence inpatient use. For example, level of access to hospitals, differences in clinical service settings and hospital reporting activity could influence use rates.

10. The proposal to combine northern and southern States to calculate two different sets of Indigenous use rates was investigated. Staff split the States into two groups. The groups were determined through age/sex standardised cost weighted Indigenous use rates. Those States which had higher than average use rates were placed in the 'high' Indigenous use group and those with lower than average use were placed in the 'low' Indigenous use group. The State groups were as follows:

- (i) high use – Queensland, Western Australia, South Australia and the Northern Territory; and
- (ii) low use - New South Wales, Victoria, Tasmania and the ACT.

11. Table 23 shows, for each State, inpatient use rates disaggregated by region. The use rates were age/sex standardised and adjusted for under-recording of Indigenous status.

Table 23 AGE/SEX STANDARDISED COST WEIGHTED ACUTE INPATIENT USE RATES BY RRMA⁽¹⁾

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Indigenous									
Capital city									0.367
Other metropolitan									0.357
Large rural									0.542
Small rural									0.637
Other rural									0.669
Remote centre									0.978
Other remote									0.737
Total									0.512
Non-Indigenous									
Capital city									0.176
Other metropolitan									0.153
Large rural									0.182
Small rural									0.216
Other rural									0.208
Remote centre									0.252
Other remote									0.214
Total									0.171
TOTAL									0.179

(1) The use rates are total inpatient separations divided by total population for each population group.
Source: 2000-01 National Hospital Morbidity Data acute inpatient separations and 2001 Census data.

12. Overall, the picture shown in Table 23 is not as straightforward as that painted by States during bilateral discussions. In capital cities, which are by far the most populous regions, Indigenous separations for the 'high' use States are all higher than average. For other regions, the picture is more confused. This is outlined below.

- (i) In the other remote regions, the 'high' use States have similar use rates to the 'low' use States.
- (ii) In the remote centre region, the national average is already the average of three of the 'high' use States.
- (iii) For the other regions, separation rates for the 'high' use States are sometimes higher, sometimes similar and sometimes lower.

13. In the case of the other metropolitan region, Queensland is the only member of the ‘high’ use group that has some of its population in this region. If use rates were calculated for ‘high’ and ‘low’ groups, the use rate would have to be the actual other metropolitan use rate for Queensland.

14. The impact of State policies has also been investigated. State policies can affect inpatient use rates through:

- (i) the level of access to hospitals;
- (ii) whether services are provided in hospitals or in other settings, such as community health centres; and
- (iii) the way in which States report hospital activity.

15. Access to hospitals has been measured through available beds per capita in each State and region. Table 24 shows the proportion of available beds by RRMA. It shows that the ‘high’ use States have more available beds per capita in capital cities and in total. This could suggest that supply is driving use. However, it could also be argued that the higher per capita bed availability is in reaction to higher use. Overall, three of the States with high Indigenous use were also the ones with the highest supply of beds.

Table 24 PROPORTION OF AVAILABLE BEDS PER 1000 POPULATION BY RRMA

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Capital city									2.5
Other metropolitan									2.5
Large rural									3.9
Small rural									3.1
Other rural									3.1
Remote centre									4.7
Other remote									5.4
Total									2.8

Source: 2000-01 National Public Hospital Establishment Data, Australian Institute of Health and Welfare.

16. Another issue that could potentially influence hospital separation rates is the way in which States choose to deliver services. We chose renal dialysis as a case study to investigate this issue based on information provided by States. New South Wales stated it delivered renal dialysis services in a variety of locations, for example, in hospitals, in satellite centres or at home. Out of hospital occasions of service are not included in hospital statistics. The Northern Territory, on the other hand, records all its renal dialysis services in hospital statistics.

17. No other States responded to our information request on State policies regarding the provision of renal dialysis services. The evidence presented above, however, suggest

that policy differences could contribute to differing levels of separations between the two groups of States, although again, the service delivery model differences may be, to some extent, the result of needs.

18. The number of separations can also be influenced by how hospitals choose to record the treatment of patients during their hospital stays. For example, a separation may not mean that a patient actually has to leave the hospital. The patient could be clinically reclassified, resulting in a statistical separation. The extent of different recording practices between the two groups of States is not known.

19. **Commission decision.** The Commission does not consider, on balance, that a disability driven case exists for the inclusion of differential Indigenous use rates. There is insufficient evidence that the Indigenous use rates are significantly different in the various State regions. Also, there is evidence to suggest that differences in use rates may be influenced by State policies. Therefore, Indigenous use rates could be influenced by State policies to some extent.

20. Therefore, the Commission cannot be confident that using State actuals or 'high' and 'low' use rates for Indigenous inpatients would further equalisation. The Commission proposes not to calculate separate Indigenous use rates for the 'high' and 'low' Indigenous use States.

HIV/AIDS and drugs

21. **1999 Review.** New South Wales said it faced a situation that led to greater use of inpatient hospital services causing the use of national average use rates to be inadequate. New South Wales said that its incidence and costs of treating HIV/AIDS were disproportionately large relative to other States. It also said it had disproportionately high levels of drug use associated with highly urbanised areas.

22. New South Wales' separations relating to HIV/AIDS and drugs were significantly higher than the national average, and therefore its standardised use was increased by 6500 cost weighted separations. The differences between actual and weighted separations in other States were much smaller and no other adjustments were made.

23. **State views.** New South Wales pointed out that services for patients with HIV/AIDS and Hepatitis C were provided in inpatient, outpatient and community based services. It stated that there had been a shift in the setting of care in recent years for programs managing HIV/AIDS and dealing with the emerging cost of Hepatitis C. As a result, the share of patient care provided for HIV/AIDS and Hepatitis C in an inpatient setting had fallen from XX per cent in 1997-98 to XX per cent in 2000-01. New South Wales suggested that the Commission make allowances for HIV/AIDS and Hepatitis C in all its health categories.

24. **Staff proposals.** Results showed that, for 1998-99 and 1999-2000, inpatient cost-weighted use rates for New South Wales were only slightly higher than the national average, and not markedly different from any other State. Based on these findings,

Commission staff proposed not continuing the HIV/AIDS and drugs adjustment for New South Wales in the Inpatient Services category.

25. **Further State views.** New South Wales disagreed with the proposal to discontinue the HIV/AIDS and drugs adjustment. It argued that there was a need for it. This was because, even if the cost differences in weighted separation rates appeared to be insignificant, the actual cost difference for New South Wales was over \$XX million, which it said was material. It stated that it had a range of services for people with HIV/AIDS, including supported accommodation. These services reduced the use for beds in acute hospitals and the activity in these facilities was not captured in hospital morbidity data.

26. Western Australia, South Australia, Queensland and Tasmania agreed with the Commission proposal that the HIV/AIDS and drugs adjustment should be discontinued.

27. In particular, Queensland noted that the identification and adjustment for States' higher than average incidence of specific diseases would add significant complexity for what was likely to be little material benefit. Tasmania added that States which have a high incidence of a particular disease are likely to have a low incidence of other diseases.

28. **Analysis.** We have examined whether a case exists that New South Wales has disability driven higher than average inpatient use rates for HIV/AIDS and drugs that result in its overall inpatient costs being higher than the national average. Table 25 shows HIV/AIDS and drug related DRG cost weighted inpatient use rates for each State and the Australian national average. Data were selected from the 1996-97, 1998-99 and 1999-2000 National Hospital Morbidity Data. The DRG cost weighted use rates are an indication of the differential use and cost for HIV/AIDS and drug related inpatient services for each State and for Australia.

Table 25 COST WEIGHTED SEPARATIONS FOR HIV /AIDS AND DRUG AND ALCOHOL RELATED CONDITIONS, PER 100 POPULATION

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1996-97									0.16
1998-99									0.11
1999-2000									0.12
2000-01									0.11

Source: 1996-97, 1998-99, 1999-2000 and 2000-01 National Hospital Morbidity Data.

29. Based on the findings, we do not consider a case has been made that New South Wales' has a significantly greater than average inpatient use rate for HIV/AIDS and drugs type illnesses.

30. New South Wales said that despite the insignificant differences in use rates, it still incurred significant costs (\$XXm) costs due to treating people with HIV/AIDS related

illnesses. New South Wales mentioned that these costs were incurred due to providing a range of services including supported accommodation.

31. While we acknowledge New South Wales' position, we do not have evidence to indicate that these costs are disability driven and are significantly different from those facing other States.

32. **Commission decision.** The Commission does not consider that a case exists to continue the HIV/AIDS and drugs adjustment for NSW. The data do not support that New South Wales has a significantly higher than average use rate for HIV/AIDS and drugs related illnesses. Based on this, the Commission decided that the HIV/AIDS and drugs adjustment for New South Wales not be continued in the 2004 Review.

Renal dialysis

33. **1999 Review.** The Northern Territory asked for a special weight to recognise its extraordinarily high and increasing use rate of renal dialysis. It argued that in the case of renal dialysis, its divergence from the standard was so pronounced that the usual Commission methods were not adequate. In the 1999 Review, the Northern Territory's standardised use was increased by 2000 cost weighted separations to roughly equal its actual use which was not policy influenced.

34. **Preliminary State views.** New South Wales said that not all end stage renal failure patients were treated as inpatients and therefore would not be picked up in the National Hospital Morbidity Data. The Northern Territory argued that the renal dialysis adjustment should continue to be made in the acute inpatient component as it still has higher than average rates of occurrence.

35. **Staff proposals.** Commission staff concluded that current State policies on renal dialysis services showed that New South Wales, Victoria and Queensland were now using a per patient type of funding. Some States were using a mixture of per patient and episode funding, while others used per episode funding.

36. Research also found that the setting for providing renal dialysis services is shifting. For example, in some States, these services are now also provided in outpatient and community settings, or at home. Some States have chosen to provide them as inpatient services, while others have chosen to move them to other settings. It may be that, in the Northern Territory, the community service setting is not as viable a treatment option as it is elsewhere.

37. Commission staff asked States for further information such as their total number of occasions of service for renal dialysis and information on funding and reporting protocols for this service. Commission staff considered that when this information was available it would be in a position to recommend whether additional needs for renal dialysis services should be assessed. If an additional assessment were pursued, renal dialysis expenditure would need to be separately identified.

38.**Further State views.** New South Wales said that the Commission should use the number of people on renal dialysis as the basis of this adjustment. It also said that NSW Health encouraged its health areas to fund the Renal Treatment Program on a number of patients basis.

39.South Australia supported the cessation of the renal dialysis adjustment on the grounds that it was no longer supported by the available data. It also noted that its funding of dialysis patients was similar to that of New South Wales, that is, on a per patient rather than on a per episode basis. South Australia considered that this type of funding reflected the increasing trend for these patients to be treated as non-inpatients.

40.The Northern Territory provided data to outline the cost of its renal dialysis services and argued that this was a material amount. It said that using average utilisation rates of renal dialysis disadvantaged States where use rates were higher due to the needs of the population. Applying a special adjustment for specific diseases was an effective manner of addressing this situation.

41.The Northern Territory also stated that it agreed that minimal use of such adjustments should be made. In effect, adjustments should only occur when States demonstrated that they experience extraordinarily high rates of a specific disease and the cost of addressing that disease was material and not accounted for elsewhere.

42.**Analysis.** Only one State was able to provide information on the total number of renal dialysis occasions of service. Therefore we are not able to determine whether a separate assessment for renal dialysis should be introduced.

43.We have examined whether a disability driven case exists that a renal dialysis adjustment for the Northern Territory should be applied.

44.Table 26 shows the inpatient use rates for renal dialysis for each State and Australia.

Table 26 DRG COST WEIGHTED USE RATE FOR RENAL DIALYSIS

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Indigenous									
1999-2000									1.93
2000-01									1.78
Non-Indigenous									
1999-2000									0.35
2000-01									0.36

Source: 1999-2000 and 2000-01 National Public Hospital Morbidity Data, AIHW.

45.The Commission acknowledges that the Northern Territory has higher than average levels of Indigenous renal dialysis use. However, Western Australia, South Australia and the ACT also have higher than average Indigenous use rates. Furthermore,

we consider that other States could also point to specific illnesses for which they have higher than average use rates.

46. While the Northern Territory, and other States, have higher than average Indigenous renal dialysis use rates, we have not found evidence to indicate that these use rates are driven by disabilities related to special Indigenous needs over and above those experienced by other States.

47. We also consider that to some extent, the Northern Territory's above average use rates may be a reflection of policy influences. Other States have noted that they are providing renal dialysis services through a number of delivery modes in addition to inpatient services. These include home and community dialysis based services. They also noted that their renal dialysis services were no longer exclusively being recorded as an inpatient service for the purposes of National Public Hospital Morbidity Data. This would result in lower renal dialysis use rates being recorded.

48. The Northern Territory stated, in its rejoinder submission, that it recorded all its renal dialysis services as inpatient episodes. The policy of recording all renal dialysis episodes as inpatient services is likely to inflate the number of separations the Northern Territory has for renal dialysis compared to other States that have adopted other protocols for recording renal dialysis services. Therefore, the higher use rate of the Northern Territory as recorded in the NHMD may, to some extent, be influenced by its reporting protocols for renal dialysis services. Conversely, the use rates of other States, as recorded in the NHMD, may be artificially lowered compared to their actual use rates for renal dialysis.

49. Also, as mentioned above in the 'Indigenous Use' section, when comparing use rates between States, a number of other potential policy influences need to be considered. For example, level of access to hospitals and hospital activity reporting protocols. These types of influences also have the potential to affect the number of separations recorded in the NHMD, which will in turn have the affect of inflating or reducing separation numbers. This is the reason national averages are preferred.

50. **Commission decision.** The Commission does not consider, on balance, that a disability driven case exists for applying an adjustment for the Northern Territory's above average Indigenous renal dialysis use rates. There is insufficient evidence that its use rates are driven by disabilities related to special Indigenous needs over and above other States. Also, there is evidence to suggest that differences in use rates may be influenced by State policies. Therefore, Indigenous use rates could be influenced by State policies to some extent.

51. The Commission cannot be confident that applying an adjustment to compensate the Northern Territory for its above average Indigenous renal dialysis use rate would further equalisation. Therefore, the Commission proposes not to apply such an adjustment for the Northern Territory.

Chronic diseases

52.1999 Review. No adjustments were made for chronic diseases.

53.Preliminary State views. The Northern Territory asked the Commission to introduce an assessment to account for its higher than average level of chronic disease and its resultant cost in hospitals. It supplied figures, outlined in Table 27, relating to standardised death rates for key chronic diseases.

Table 27 STANDARDISED DEATH RATE (PER 100,000) FROM KEY CHRONIC DISEASES

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Diabetes mellitus	0.8060	1.1866	1.0522	1.0522	1.0522	0.7836	0.6642	2.9030
Diseases of the circulatory system	1.0592	0.9241	1.0191	0.8869	1.0162	1.0840	0.9866	1.2567
Diseases of the respiratory system	1.0290	0.8841	0.9151	0.8551	1.1201	1.1615	0.7433	1.8447
Diseases of the digestive system	0.9347	0.8141	0.8844	0.9146	1.0101	0.9899	0.5829	2.1759
Total	1.0340	0.9220	0.9942	0.8911	1.0347	1.0766	0.9038	1.4928

Source: Source: ABS Catalogue No. 3303.0, *Causes of Death Australia, 2000*, Table 1.7.

54. **Staff proposals.** Staff considered that it is possible that some disabilities which are already recognised by the Commission, such as Indigeneity, population location and SES, could explain the interstate differences in standardised death rates from chronic diseases. Commission staff were not convinced that an adjustment for chronic disease should be pursued.

55. **Further State views.** Queensland commented that the higher than average incidence of chronic diseases in Indigenous populations should be reflected in Indigenous utilisation rates and outlier adjustments.

56. The Northern Territory stated that it was disadvantaged by the use of national averages to calculate Indigenous use rates. It said that two approaches have been suggested for overcoming this problem. They were the continued use of national averages and special adjustments or the use of actual data. The Northern Territory suggested that while actual data may be influenced by policy, the extremely high levels of unmet need in the Indigenous population meant that any policy influence was unlikely to result in over-servicing of the population.

57. The Northern Territory stated that the Commission currently applied a renal dialysis adjustment to compensate it for above average use. It would like the Commission to introduce a similar adjustment to account for its above average levels of chronic diseases in the Indigenous population.

58. It suggested that if the Commission did not wish to use death rates to carry out such an adjustment, then a similar method to that used in the 1999 Review renal dialysis adjustment should be introduced. Diagnosis Related Groups within four of the Major

Diagnostic Classification (MDC) categories (MDCs 4, 5, 6 and 10) were relevant. The Northern Territory suggested that an adjustment should be applied when the Northern Territory's use rate was significantly greater than the average for Indigenous patients.

59.**Analysis.** We have examined whether a disability driven case exists that a chronic diseases adjustment for the Northern Territory should be applied.

60. We examined, for each State, the DRG cost weighted use rate for the MDCs suggested by the Northern Territory. The Commission acknowledges that death rates from chronic diseases are above average in the Northern Territory. However, the separation rates in Table 28 show that the Northern Territory does not have markedly higher than average use rates compared to other States.

Table 28 DRG COST WEIGHTED USE RATES FOR ACUTE INPATIENTS (PER 100 POPULATION) BY MAJOR DIAGNOSTIC CATEGORIES

Major Diagnostic Category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Indigenous separations only									
4 - Diseases and Disorders of the Respiratory system									3.10
5- Diseases and Disorders of the Circulatory system									2.10
6- Diseases and Disorders of the Digestive system									1.71
10- Endocrine, Nutritional and metabolic diseases and disorders									0.93
Non-Indigenous separations only									
4 - Diseases and Disorders of the Respiratory system									1.34
5- Diseases and Disorders of the Circulatory system									2.21
6- Diseases and Disorders of the Digestive system									1.69
10- Endocrine, Nutritional and metabolic diseases and disorders									0.32

Source: 2000-01 National Hospital Morbidity Data, Australian Institute of Health and Welfare.

61.**Commission decision.** The Commission does not consider that a case exists for applying an adjustment for chronic disease use rates in the Northern Territory. The data show that its use rates were not markedly different to other States.

62. Therefore, the Commission proposes not to introduce a chronic diseases adjustment for the Northern Territory in the 2004 Review.