NSW Hospitals: Are They 'Pro-Rich' or 'Pro-Poor'?

by

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Issues Addressed

Using a unique patient-based NSW Hospitals dataset over the 1996-97 to 1999-00 period, we study:

- The distribution of average patients costs by socioeconomic status
  - ⇒ by public vs private hospitals and public vs private patients in public hospitals for:
    - all hospital services; and
    - coronary heart disease

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ARC Project: Hospital Usage and Socioeconomic Status in Australia

- NSW public / private hospital records (confidentialised data)
- Four years of administrative data: 1996-97 to 1999-00
- Patient based
- Geo-coded at Census Collection District (CD) level
- Unique measure of socioeconomic status imputed at the patient level

  ⇒ equivalent family income quintiles for each age / gender / CD group were derived from Census unit record file
- Full diagnosis and procedure details
- Gross and net costs per patient and by separation
- See Technical Paper No 29 at www.natsem.canberra.edu.au for full details of the methodology of the project

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Cost of Hospital Services: Patient Based with Imputed Socioeconomic Status (SES)

- Costs are patient-based with all separations aggregated for individuals receiving related services during the year

  ⇒ enables the costs of hospital services to be compared by SES and across sectors in the hospitals system at the patient level

- The average cost of patients treated for Coronary Heart Disease is separately calculated
- Separate average patient costs are calculated for each of the four years 1996-97 to 1999-00

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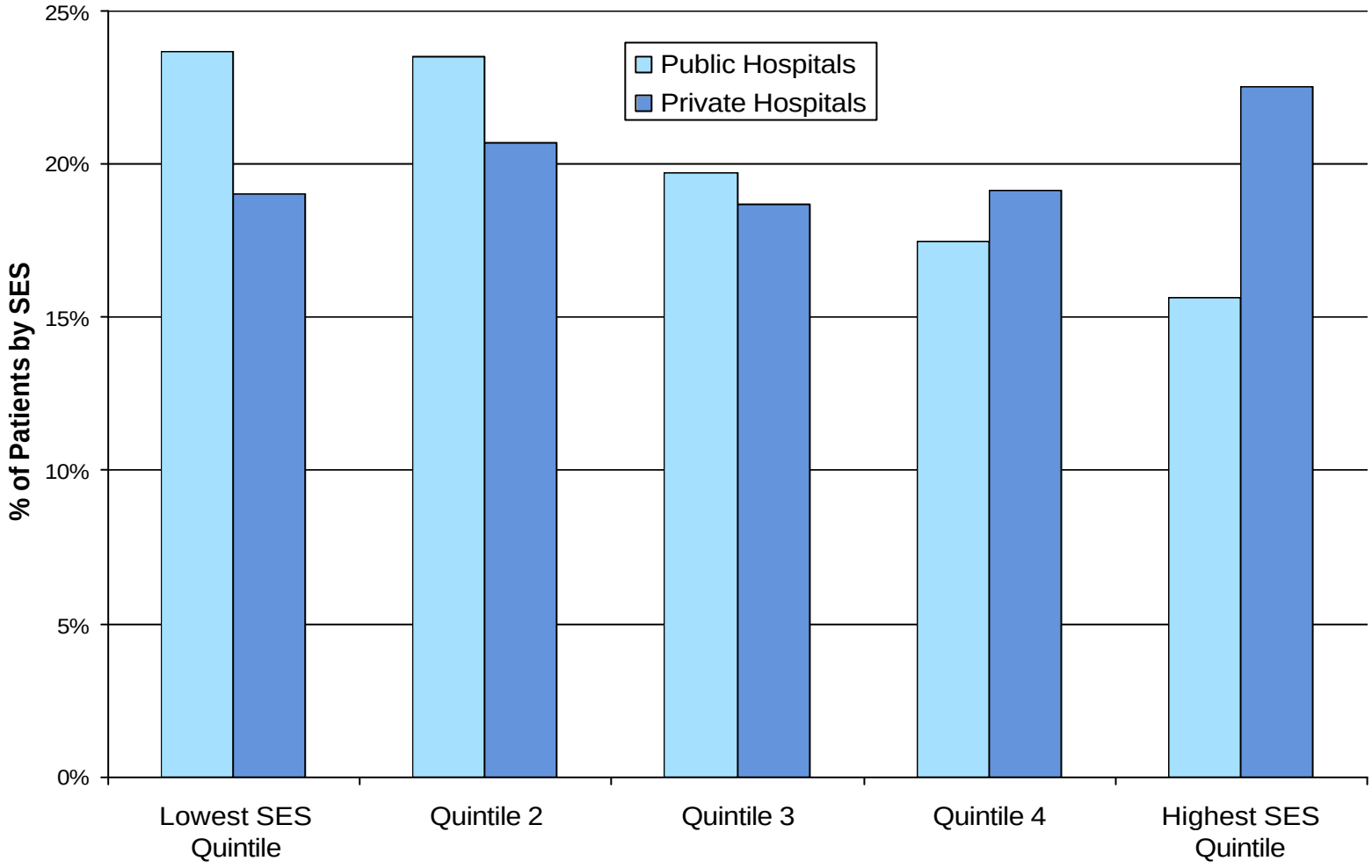
Patient Distribution by SES
Public versus Private Hospitals, 1999-00



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Patient Distribution by SES: Public versus Private Hospitals

- Public hospitals were pro-poor
  - ⇒ 24% of their patients in the poorest 20% of the population
- Private hospitals were pro-rich
  - ⇒ 23% of their patients in the richest 20% of the population
- The distribution of patients by SES within public and private hospitals remained virtually unchanged over the 1996-97 to 1999-00 period
  - ⇒ note that Lifetime Health Cover was introduced after this period (1 July 2000)

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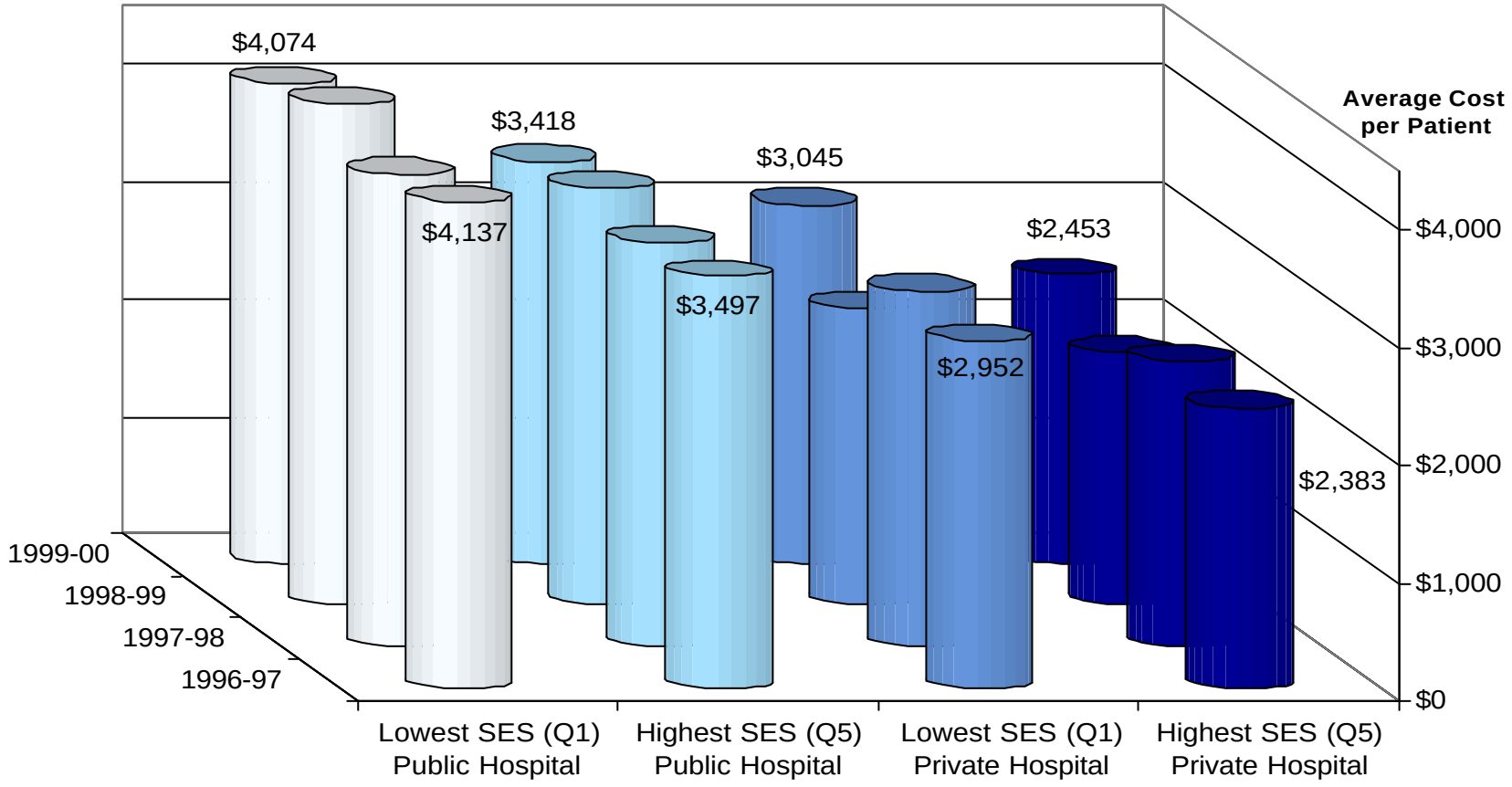
Average per Patient Costs by SES: Public vs Private Hospitals



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Average per Patient Costs by SES: Public vs Private Hospitals

- Both public and private hospitals were pro-poor
  - ⇒ average per patient costs were 17-20% greater for lowest quintile patients in public hospitals than for top quintile patients (gap: $656 in 1999-00)
  - ⇒ in private hospitals up to 24% more was spent on lowest quintile patients than on top quintile patients (gap: $592 in 1999-00)
- Average cost per patient was considerably higher in public hospitals than in private hospitals
  - ⇒ $3,821 per **public** hospital patient in 1999-00
  - ⇒ $2,784 per **private** hospital patient in 1999-00

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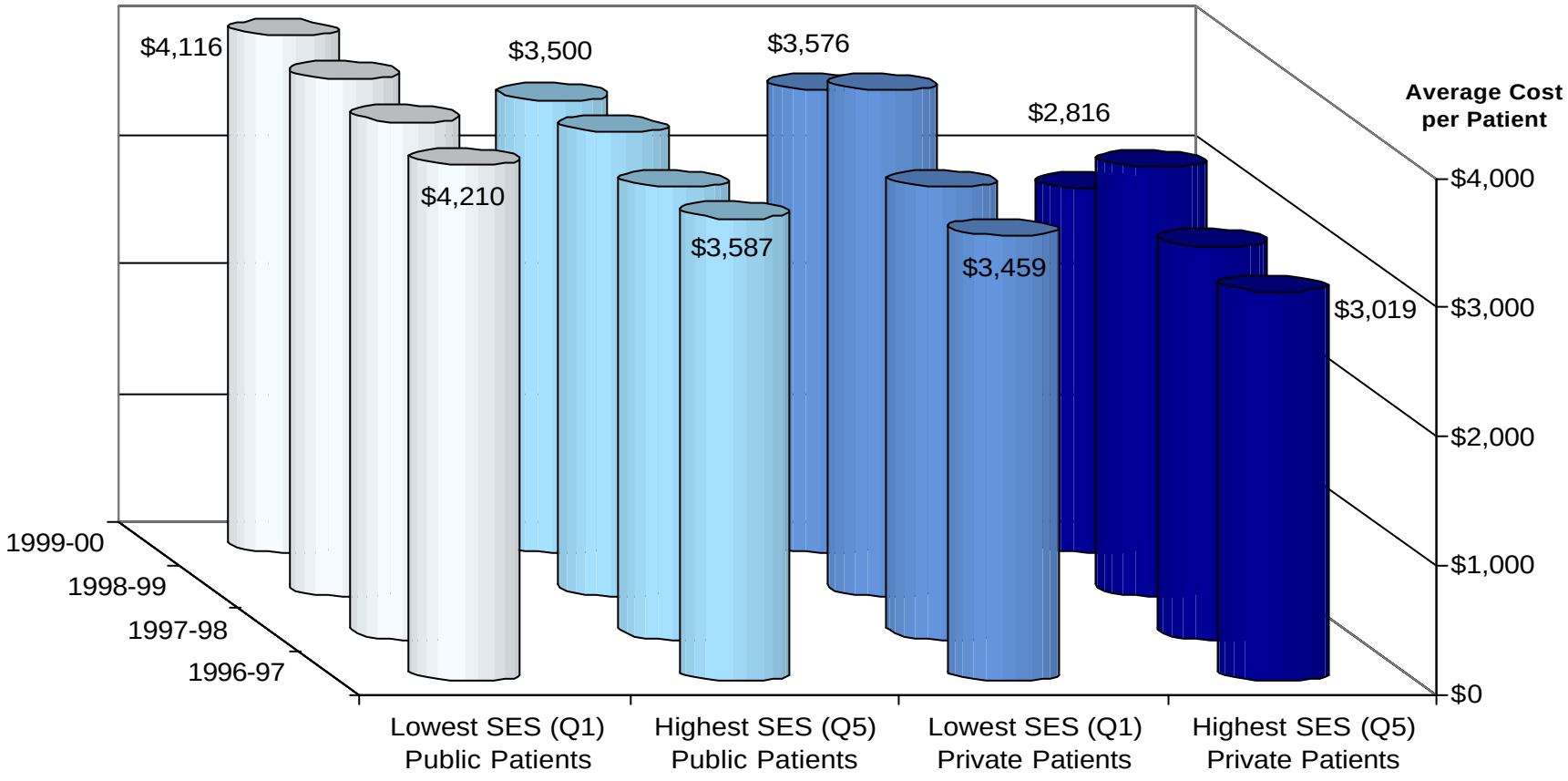
Public Hospitals Only: Average Costs for Public and Private Patients



Public Hospitals Only

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Public Hospitals Only: Average Costs for Public and Private Patients

- The average costs of both public and private patients in public hospitals were pro-poor
  - ⇒ the additional amount spent on Q1 public patients than Q5 public patients remained around 16-20% ($616 in 1999-00)
  - ⇒ the additional amount spent on Q1 private patients than Q5 private patients fell to 15-18% (except in the final year)
- The average cost of private patients in public hospitals was higher than for patients in private hospitals
  - ⇒ by $491 in 1999-00

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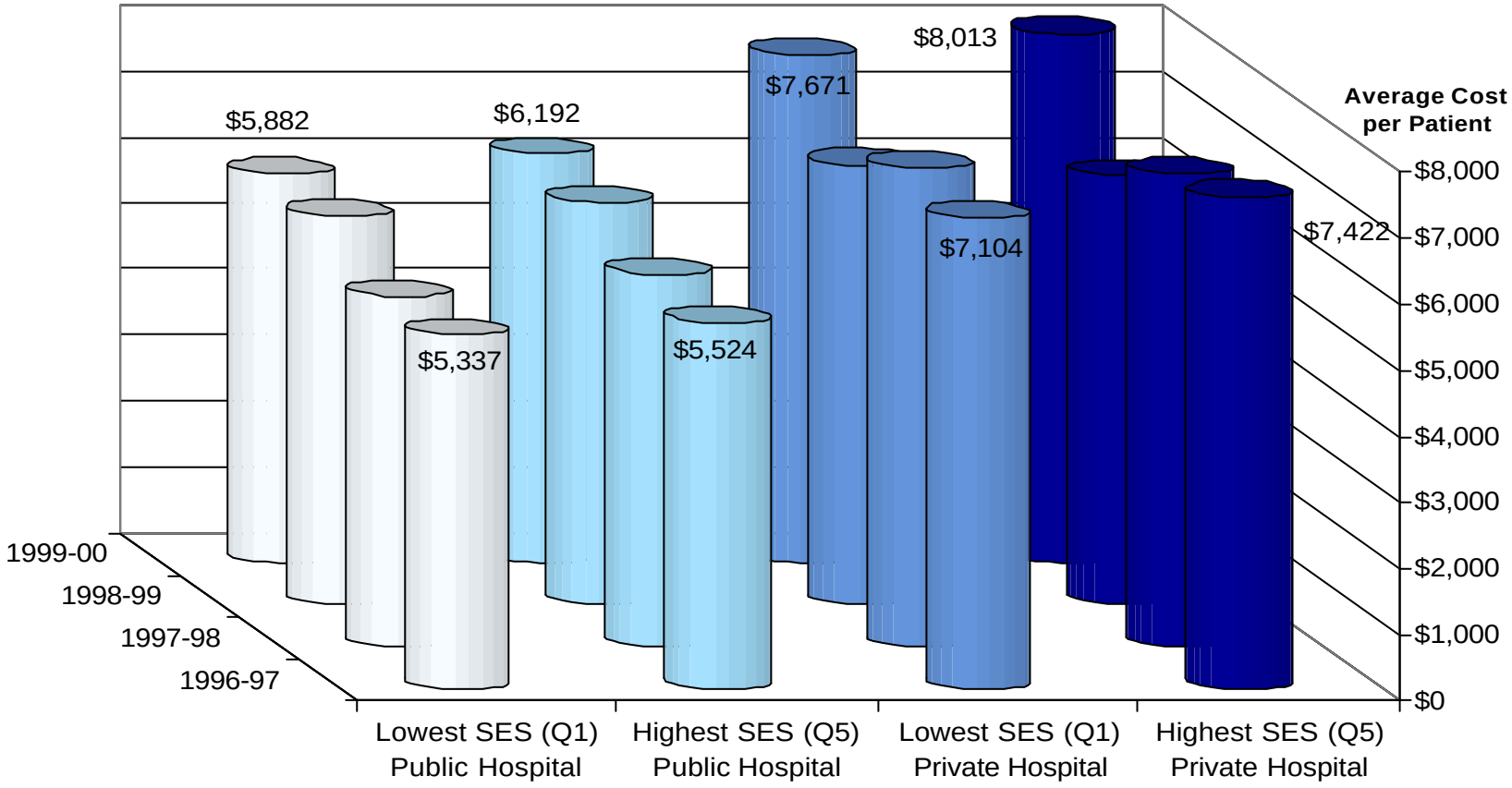
Coronary Heart Disease: Average Patient Costs by SES, Public vs Private Hospitals



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Coronary Heart Disease: Average Patient Costs by SES, Public vs Private Hospitals

- Average costs of treating patients with CHD were higher in private hospitals than in public hospitals ($7,866 versus $5,967 in 1999-00)

  ⇒ contrasts with average cost of treating **all** hospital patients, which was lower in private hospitals ($2,784 versus $3,821)

- Treatment of patients with coronary heart disease (CHD) was pro-rich

  ⇒ per patient costs were $6,192 for Q5 patients in public hospitals ($8,013 in private hospitals), and $5,882 for Q1 patients in public hospitals ($7,671 in private hospitals) in 1999-00

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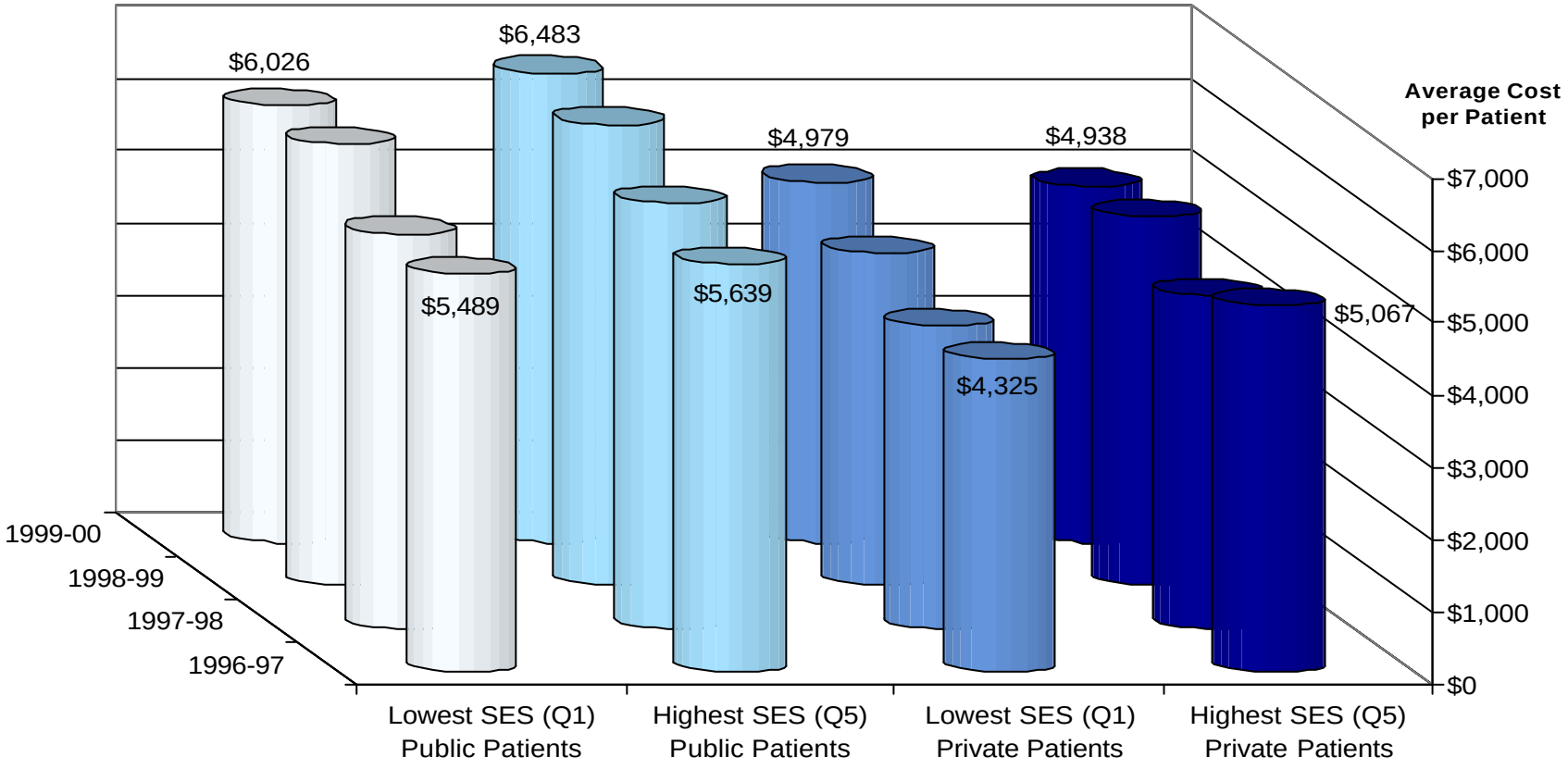
Public Hospitals and CHD: Average Patient Costs, Public vs Private Patients



Public Hospitals Only

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Public Hospitals and CHD: Average Patient Costs, Public vs Private Patients

- In public hospitals, public CHD patients cost more on average than private CHD patients ($1,067 more in 1999-00)
- The inequality gradient between CHD public and private patients in public hospitals was pro-rich

  ⇒ however, for private patients the gap between Q1 and Q5 has narrowed to near equality over the 1997 - 2000 period

- In public hospitals the average cost of treating public patients is growing faster than for private patients (3.3% pa versus 1.8% pa)

  ⇒ however, this growth has been uneven across SES quintiles with the average cost of treating Q5 private patients in public hospitals declining by 0.9%

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Conclusions

- Based on the populations serviced:

  ⇒ NSW ***public hospitals*** were found to be ***pro-poor***

  ⇒ but ***private hospitals*** were ***pro-rich***

- Based on average per patient costs, hospital services overall were pro-poor:

  ⇒ the average cost per patient was higher for the poor (Q1) than for the rich (Q5) - regardless of whether people were in public or private hospitals, or were public or private patients

  – around *20% more on average was spent on the poor* (Q1) than on the rich (Q5) over the period in both public and private hospitals

  ⇒ average cost per patient was considerably higher in public hospitals than in private - $3,821 versus $2,783 in 1999-00

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Conclusions *(cont)*

- Average per patient costs for Coronary Heart Disease, a major cause of morbidity, varied with SES and:

  ⇒ were generally higher for the rich than for the poor

  – 5% higher in public hospitals (4% in private hospitals) in 1999-00 for Q5 than for Q1

  ⇒ were higher in public hospitals for public patients than for private patients ($1,067 higher in 1999-00 for Q5 than Q1)

  ⇒ grew at 3.3% pa over the period for public patients compared to 1.8% pa for private patients in public hospitals

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NSW HOSPITALS: ARE THEY 'PRO-RICH' OR 'PRO-POOR'?

**Linc Thurecht, Agnes Walker,
Jim Pearse and Ann Harding**

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About NATSEM

The National Centre for Social and Economic Modelling was established on 1 January 1993, and supports its activities through research grants, commissioned research and longer term contracts for model maintenance and development with the federal departments of Family and Community Services, and Education, Science and Training.

NATSEM aims to be a key contributor to social and economic policy debate and analysis by developing models of the highest quality, undertaking independent and impartial research, and supplying valued consultancy services.

Policy changes often have to be made without sufficient information about either the current environment or the consequences of change. NATSEM specialises in analysing data and producing models so that decision makers have the best possible quantitative information on which to base their decisions.

NATSEM has an international reputation as a centre of excellence for analysing microdata and constructing microsimulation models. Such data and models commence with the records of real (but unidentifiable) Australians. Analysis typically begins by looking at either the characteristics or the impact of a policy change on an individual household, building up to the bigger picture by looking at many individual cases through the use of large datasets.

It must be emphasised that NATSEM does not have views on policy. All opinions are the authors' own and are not necessarily shared by NATSEM.

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Abstract

Given concerns about ever increasing government health spending and the distributional impact of such spending, this paper aims to improve our understanding of health inequalities in the NSW hospitals system.

We are drawing upon a unique patient based dataset that includes all separations and their associated cost from NSW hospitals over the four year period to 1999-00, with the socioeconomic status of patients imputed onto it. We first examine whether the average cost of treating patients changes in line with variations in their socioeconomic status. Coronary heart disease is then separately examined as a case study. This analysis considers the use of public and private sector hospitals by individuals and also distinguishes between public and private patients treated in public hospitals.

Author note

Linc Thurecht is a Senior Research Fellow, Agnes Walker is a Principal Research Fellow and Ann Harding is the Director at the National Centre for Social and Economic, Modelling, University of Canberra. Jim Pearse is Director of Funding and Systems Policy Branch, NSW Department of Health.

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We would especially like to thank Andrew Gibbs and Durham Bennett from the NSW Department of Health for their valuable assistance in compiling and interpreting the datasets used in this study.

General caveat

NATSEM research findings are generally based on estimated characteristics of the population. Such estimates are usually derived from the application of microsimulation modelling techniques to microdata based on sample surveys.

These estimates may be different from the actual characteristics of the population because of sampling and nonsampling errors in the microdata and because of the assumptions underlying the modelling techniques.

The microdata do not contain any information that enables identification of the individuals or families to which they refer.

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1 Introduction

Given concerns about ever increasing government health spending and the distributional impact of such spending, this paper aims to improve our understanding of health inequalities between public and private patients in the hospitals system.

We are drawing upon a unique patient based dataset that includes all separations and their associated cost from NSW hospitals over the four year period to 1999-00. We first examine whether the average cost of treating patients changes in line with variations in their socioeconomic status. Coronary heart disease, the leading cause of sudden death in Australia, is then separately examined as a case study. This analysis also considers the use of public and private sector hospitals by individuals and distinguishes between public and private patients treated in public hospitals.

While it is well known that socioeconomic status is a health risk factor (eg see AIHW 2002a) there has been comparatively little research examining the specific distributional characteristics of hospital patients. Previous findings reported by Robertson *et al* (1998) show that admission rates and the type of treatment given to patients with acute myocardial infarction vary with socioeconomic status.[1] We build upon these findings by examining all patients treated in NSW hospitals and by imputing at the patient level a unique measure of socioeconomic status based on equivalent family income extracted from 1996 Census unit record files. This enables a more accurate distributional analysis of patients to be conducted.

2 Data description

The findings presented in this paper are based on separations from both public and private hospitals in NSW over the period 1996-97 to 1999-00. A full description of the data is provided in Thurecht *et al* (2003). This source data was then adjusted in a number of ways to produce the findings presented below.

Certain separations were first removed from the base datasets for ongoing analysis. These were separations from interstate hospitals and those from Statistical Local Areas (SLA) where there was a high proportion of interstate flows. Specifically, if 30% or more of the separations for patients from a particular SLA were from an interstate hospital then all separations from that SLA were removed. This is because the true

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[1] Coronary heart disease consists mainly of acute myocardial infarction (heart attack) and angina.

provision of hospital services by NSW hospitals for residents of that SLA would be misrepresented, given the high level of interstate separations.

The net cost of treating each patient was then calculated by aggregating all separations by the same patient for the same service.[2] Services were aggregated as outlined in Appendix E of Thurecht *et al* (2003). These patient based costs were then examined for outliers, with the top 0.04% of all patient records being removed from further analysis.

A summary of the source number of records and how many were removed at each stage of the process outlined above is provided in Table 1.

Table 1: Creation of Patient-Based Datasets

	1996-97	1997-98	1998-99	1999-00
Source Number of Separations	1,800,700	1,865,374	1,887,842	1,899,011
less Separations from Interstate Hospitals	36,620	42,753	43,302	36,719
Patient-Service Records*	1,145,569	1,170,118	1,183,996	1,196,588
less High Interstate Flow SLAs	5,778	9,448	8,921	8,612
less High Cost Outliers	455	464	470	475
Number of Patient-Service Records*	1,139,336	1,160,206	1,174,605	1,187,501

* "Patient-Service Records" refers to separations for the same patient for the same service. Services where aggregated as outlined in Appendix E of Thurecht *et al* (2003).

In this paper socioeconomic status is measured by equivalent family income (EFI) quintiles. EFI is a measure of economic resources available to a family and reflects how the composition of a family unit affects the relative resources available to it. An EFI quintile was imputed onto each patient record based on the EFI of the full NSW population as measured by the 1996 Census. The imputation was based on the

[2] Net costs are calculated as outlined in Section 2.2 of Thurecht *et al* (2003). The method involves subtracting from the gross cost of treatment any revenue that the government may have received for treating the patient.

distribution of socioeconomic status at the Census Collection District level by sex and age as described in Section 4.2 of Thurecht *et al* (2003).

Finally, one of the analyses conducted in this paper is the difference between public and private patients treated in public hospitals. These patients were identified by the payment status attached to their separation record (refer to Appendix B of Thurecht *et al* (2003) for coding details associated with payment status).

3 The Proportion of Patients by Socioeconomic Status – Public versus Private Hospitals

While the main focus of the paper is on the average costs of treating patients, as a first step to analysing the data the distribution of patients by socioeconomic status (SES) is examined below. This reveals the extent to which certain segments of the population may be over or under represented in the population of hospital users. Table 2 shows the distribution by socioeconomic status quintile for patients treated in public and private hospitals.

Table 2: Distribution of Patients by SES Quintile

	Public Hospitals (%)				Private Hospitals (%)			
	1996-97	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00
Lowest SES Quintile	23.8	23.7	23.7	23.7	18.6	18.8	18.6	19.0
Quintile 2	23.4	23.4	23.5	23.5	20.0	20.3	20.1	20.7
Quintile 3	19.6	19.8	19.7	19.7	19.0	18.8	18.7	18.7
Quintile 4	17.3	17.4	17.5	17.5	19.6	19.3	19.3	19.1
Highest SES Quintile	15.8	15.7	15.7	15.6	22.9	22.8	23.2	22.5

Table 2 reveals that public hospitals are 'pro-poor', with both of the two bottom quintiles having more than 20% of the public hospital patient population. Private hospitals, however, are 'pro-rich' with the top quintile having over 20% of the private hospital patient population.[3]

[3] Thurecht *et al* (2002) provide a similar analysis by age and gender for 1998-99, including proportions of the underlying NSW population for each socioeconomic group.

Over the four years there has been little change in the distribution of patients by socioeconomic status. While there have been various changes in government policy directed at stimulating the take-up of private health insurance in recent years, the policy change with the greatest impact, Lifetime Health Cover, was not introduced until 1 July 2000. A chart comparing the distribution of patients in public and private hospitals by age and socioeconomic status for 1999-00 is provided in Appendix A.

4 Average Patient Costs by Socioeconomic Status

While Table 2 shows the number of patients by socioeconomic status treated across the two hospital sectors, an alternative way to examine the distributional differences in hospital populations is to compare the average cost of treatment per patient. This Section compares average patient costs for public and private hospitals and, for those patients treated in public hospitals, public and private patients.

4.1 Public versus Private Hospitals

The first comparison of average patient costs is between the public and private hospital sectors. Table 3 summarises these costs by socioeconomic status over the four years for the two sectors.

Table 3 shows that in all years average patient costs were higher in public hospitals than in private hospitals. Furthermore, both sectors are 'pro-poor' in the sense that average patient costs favour lower socioeconomic patients by a ratio of 1.17 to 1.20, and in private hospitals with a ratio of 1.18 to 1.24. Except for slightly higher average costs for Quintile 2 patients in both public and private hospitals, average patient costs decline as socioeconomic status increases.

Over the four year period, average costs across all patients declined at an annual compound rate of 0.4% in public hospitals while they grew at 1.1% in private hospitals.

Table 3: Average Patient Costs by Socioeconomic Status

	Public Hospitals				Private Hospitals			
	1996-97	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00
Lowest Quintile ($)	4,137	4,011	4,269	4,074	2,952	3,018	2,522	3,045
Quintile 2 ($)	4,181	4,047	4,366	4,202	3,059	3,113	2,630	3,145
Quintile 3 ($)	3,786	3,608	3,808	3,670	2,662	2,732	2,326	2,773
Quintile 4 ($)	3,532	3,433	3,607	3,500	2,491	2,534	2,183	2,535
Highest Quintile ($)	3,497	3,432	3,550	3,418	2,383	2,432	2,135	2,453
Average ($)	3,873	3,748	3,972	3,821	2,698	2,756	2,352	2,784
Ratio	1.18	1.17	1.20	1.19	1.24	1.24	1.18	1.24
Difference ($)	640	579	719	656	569	586	387	592
% Difference	15.5	14.4	16.8	16.1	19.3	19.4	15.3	19.4

Note: Ratio = Lowest Quintile / Highest Quintile
Difference = Lowest Quintile - Highest Quintile
% Difference = Difference / Lowest Quintile
The difference in same quintile average patient costs between public and private hospitals are all significant at the 0.1% level.

4.2 Public versus Private Patients in Public Hospitals

The next comparison of average patient costs is between the public and private patients treated in public hospitals. Table 4 summarises these costs by socioeconomic status over the four years for these two types of patients.

Table 4 shows that within public hospitals average patient costs are higher for public than private patients. Furthermore, the same 'pro-poor' pattern in average costs is present as was revealed when comparing public and private hospitals. However, the differential between the average cost per patient between lower and higher socioeconomic patients is lower for private patients treated in public hospitals than for patients treated in private hospitals. Whereas in private hospitals the ratio was in the range 1.18 to 1.24 (Table 3), for private patients treated in public hospitals the ratio was lower at 1.15 to 1.18 in the first three years (Table 4).

Table 4: Average Patient Costs by Socioeconomic Status (Public Hospitals Only)

	Public Patients				Private Patients			
	1996-97	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00
Lowest Quintile ($)	4,210	4,059	4,302	4,116	3,459	3,498	3,913	3,576
Quintile 2 ($)	4,266	4,094	4,396	4,256	3,425	3,569	4,062	3,586
Quintile 3 ($)	3,850	3,651	3,829	3,710	3,288	3,206	3,610	3,236
Quintile 4 ($)	3,602	3,474	3,616	3,536	3,055	3,104	3,525	3,152
Highest Quintile ($)	3,587	3,496	3,587	3,500	3,019	3,041	3,319	2,816
Average ($)	3,955	3,801	4,004	3,874	3,249	3,284	3,686	3,275
Ratio	1.17	1.16	1.20	1.18	1.15	1.15	1.18	1.27
Difference ($)	623	563	715	616	440	457	594	760
% Difference	14.8	13.9	16.6	15.0	12.7	13.1	15.2	21.2

Note: Ratio = Lowest Quintile / Highest Quintile
Difference = Lowest Quintile - Highest Quintile
% Difference = Difference / Lowest Quintile
The difference in same quintile average patient costs between public and private hospitals are all significant at the 0.1% level.

Over the four year period average costs across all public patients declined at an annual compound rate of 0.7% while they grew for private patients in public hospitals at 3.3%.

5 Coronary Heart Disease - Average Patient Costs by Socioeconomic Status

This Section focuses on the distributional characteristics of patients treated in NSW hospitals for coronary heart disease (CHD).[4] CHD is a sub-set of cardiovascular health disease, which is one of the National Health Priority Areas. The same analysis

[4] CHD patients were identified as those with a principal diagnoses code relating to ischaemic heart disease. For 1996-97 and 1997-98 these were diagnosis codes in the range 410 – 414 (ICD-9-CM) and for 1998-99 and 1999-00 these were diagnosis codes in the range I20 – I25 (ICD-10-AM).

is conducted as in the previous Section. While average costs per admission have previously been reported (eg see Table 6.2 in AIHW 2002b), the following results are prepared on the basis of the average cost per patient for different socioeconomic groups.

NSW Health (2002) identifies CHD (along with stroke) as the leading form of cardiovascular disease in NSW. In 2000, 20.9% of all deaths were related to CHD. The disease is also the largest cause of years of life lost due to premature death in NSW. While socioeconomic status is recognised as a risk factor (eg see AIHW 2002b), research on the socioeconomic distribution of patients is limited. Two exceptions are Robertson *et al* (1998) and AIHW (2001). However, both these papers attribute socioeconomic status at a broad level – the former for general geographic regions of Victoria and the latter based on the Australian Bureau of Statistics Index of Relative Socioeconomic Disadvantage at the Statistical Local Area level.

In our study we impute socioeconomic status directly onto the patient record based on the actual socioeconomic distribution of the NSW population at the time of the 1996 Census. This distribution is taken at the Census Collection District-sex-age level. This enables a more accurate analysis to be conducted on the distributional differences in average patient costs across different sectors of the hospitals system.

To facilitate comparison of CHD patients to the full patient population, a chart comparing the distribution of these patients in public and private hospitals by age and socioeconomic status for 1999-00 is provided in Appendix B. In future work we will be exploring further the extent to which the differences in the average treatment costs for the higher and lower quintiles is due to differences in the age of such patients.

5.1 CHD: Public versus Private Hospitals

The first comparison for patients treated for CHD is between public and private hospitals. Table 5 summarises average patient costs by socioeconomic status over the four years for the two sectors.

Table 5 shows that the average cost of treating patients with CHD is higher in private hospitals than in public hospitals. Whereas public hospitals are 'pro-poor' when considering all hospital services, treatment of patients for CHD in public hospitals becomes 'pro-rich' in the sense of greater average patient costs for higher socioeconomic patients. However, the difference in average costs between the two groups, while reversed, is not as great as when compared to all services. For private hospital CHD patients, the results are more mixed with two years showing a slight

'pro-rich' bias and two years being more 'pro-poor'. As with public hospitals, the difference in the average cost of treatment between high and low socioeconomic CHD patients is lower than observed for all services.

Table 5: Average Patient Costs by Socioeconomic Status for CHD

	Public Hospitals				Private Hospitals			
	1996-97	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00
Lowest Quintile ($)	5,337	5,283	5,871	5,882	7,104	7,246	6,647	7,671
Quintile 2 ($)	5,503	5,310	5,756	5,971	7,372	7,283	6,313	7,800
Quintile 3 ($)	5,523	5,289	6,142	5,902	7,083	7,392	6,178	8,136
Quintile 4 ($)	5,357	5,491	6,330	6,000	7,251	7,307	5,982	7,760
Highest Quintile ($)	5,524	5,619	6,074	6,192	7,422	7,149	6,487	8,013
Average ($)	5,445	5,364	5,980	5,967	7,253	7,274	6,338	7,866
Ratio	0.97	0.94	0.97	0.95	0.96	1.01	1.02	0.96
Difference ($)	-187	-336	-203	-310	-318	97	160	-342
% Difference	-3.5	-6.4	-3.5	-5.3	-4.5	1.3	2.4	-4.5

Note: Ratio = Lowest Quintile / Highest Quintile
Difference = Lowest Quintile - Highest Quintile
% Difference = Difference / Lowest Quintile
The difference in same quintile average patient costs between public and private hospitals are all significant at the 0.1% level (except for Quintiles 3 – 5 for 1998-99).

Over the four year period average costs across all CHD patients increased at an annual compound rate of 3.1% in public hospitals compared with 2.7% in private hospitals.

5.2 CHD: Public versus Private Patients in Public Hospitals

The next comparison for patients treated for CHD is between the public and private patients treated in public hospitals. Table 6 summarises average patient costs by socioeconomic status over the four years for the two types of patients.

Table 6: Average CHD Patient Costs by Socioeconomic Status (Public Hospitals Only)

	Public Patients				Private Patients			
	1996-97	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00
Lowest Quintile ($)	5,489	5,458	6,111	6,026	4,325	4,180	4,600	4,979
Quintile 2 ($)	5,597	5,491	5,942	6,046	4,914	4,147	4,670	5,454
Quintile 3 ($)	5,614	5,505	6,362	6,089	5,031	4,019	4,994	4,862
Quintile 4 ($)	5,476	5,658	6,517	6,230	4,724	4,671	5,472	4,928
Highest Quintile ($)	5,639	5,883	6,383	6,483	5,067	4,607	5,089	4,938
Average ($)	5,559	5,555	6,198	6,125	4,801	4,295	4,908	5,058
Ratio	0.97	0.93	0.96	0.93	0.85	0.91	0.90	1.01
Difference ($)	-150	-425	-272	-457	-742	-427	-489	41
% Difference	-2.7	-7.8	-4.4	-7.6	-17.2	-10.2	-10.6	0.8

Note: Ratio = Lowest Quintile / Highest Quintile
Difference = Lowest Quintile - Highest Quintile
% Difference = Difference / Lowest Quintile
The difference in same quintile average patient costs between public and private hospitals is significant at the 0.1% level for Quintiles 2 – 5 in 1996-97, all Quintiles in 1998-99 and Quintile 2 in 1999-00.

Table 6 shows that, considering public hospitals only, the average cost of treating public patients for CHD is higher than for private patients. Furthermore, the average cost of treating both types of patients is 'pro-rich' in the sense that higher socioeconomic status patients have a higher average cost of treatment than lower socioeconomic status patients (except the final year for private patients). However, when compared to the average cost of treatment for CHD in private hospitals, while the average cost of treating private patients has fallen, the gap between average costs of treatment for low and high socioeconomic status patients has increased (except for the final year). Therefore, while the cost of treating private patients for CHD in public hospitals is lower than in private hospitals, the gap between lower and higher socioeconomic patients has increased.

Over the four year period average costs across all public CHD patients increased at an annual compound rate of 3.3% while they grew for private CHD patients in public hospitals at 1.8%.

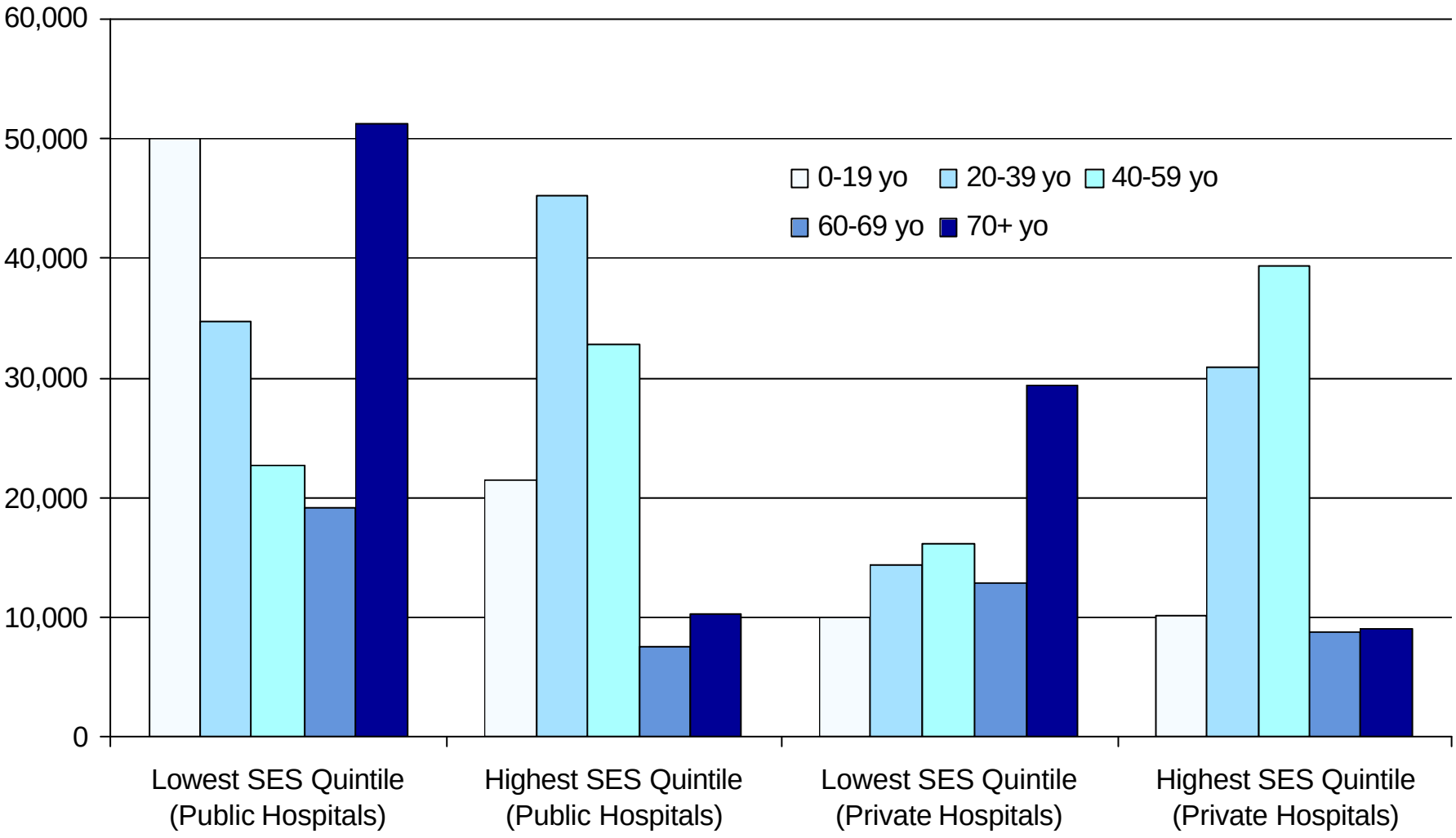
6 Conclusion

This paper provides evidence that public hospitals are 'pro-poor' and private hospitals are 'pro-rich' in terms of the number of patients treated. However, when examining the average cost of treating these patients, some differing patterns emerge.

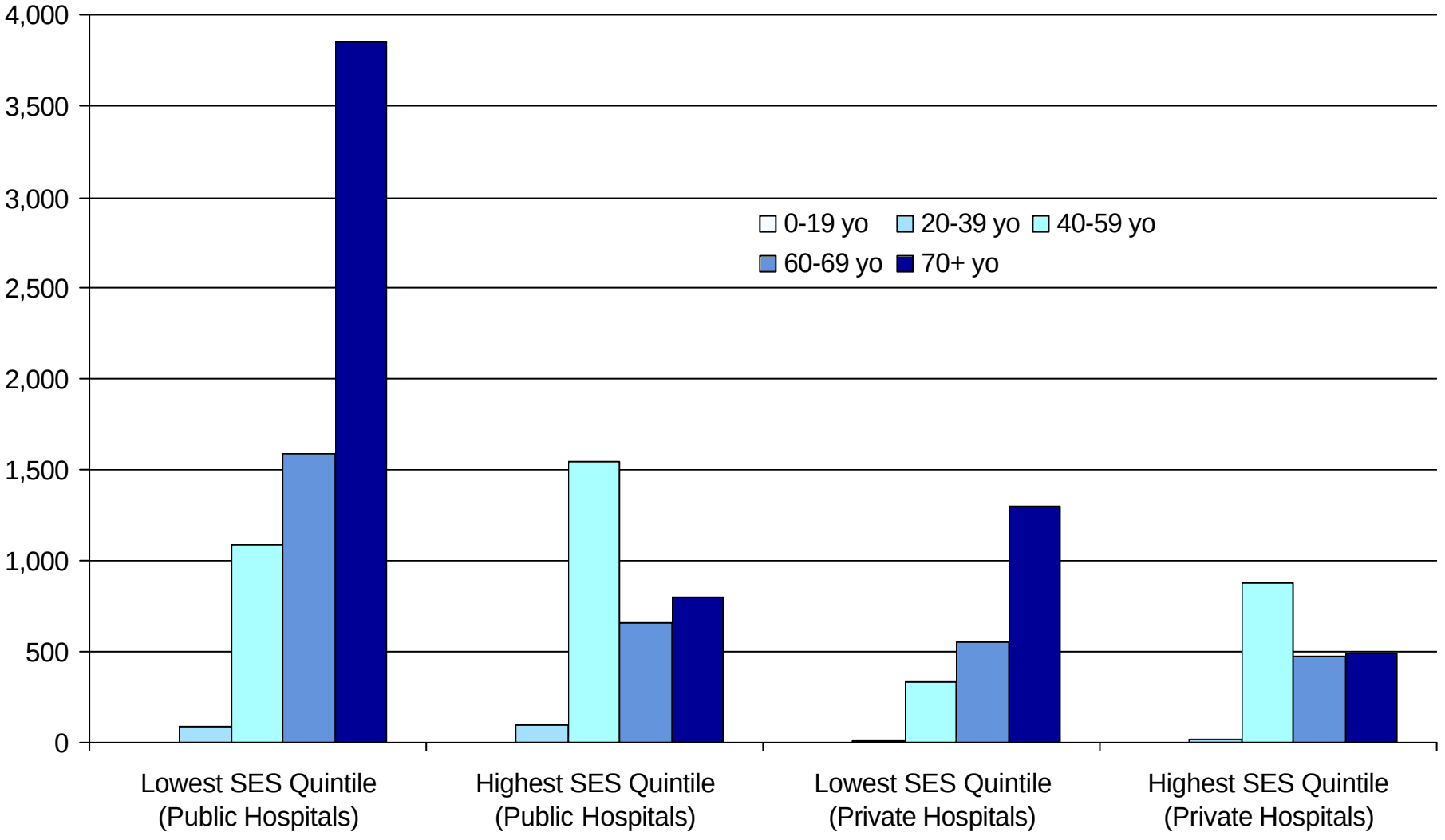
First, the average cost of treatment in both public and private hospitals is greater for lower socioeconomic status patients. This is also true when comparing the average cost of treatment of public and private patients in public hospitals only, although the difference in average private patient costs between the higher and lower quintiles narrows.

However, when examining coronary heart disease in isolation (a sub-set of one of the National Health Priority Areas), public hospitals are 'pro-rich' in the sense that average patients costs are greater for those of higher socioeconomic status. Furthermore, when comparing the average cost of treating coronary heart disease for private patients in public hospitals, higher socioeconomic status patients cost more on average than lower socioeconomic status patients (except for the final year). Finally, the average cost of treating private patients for CHD in public hospitals is much lower than in private hospitals.

A Distribution by Age and Socioeconomic Status in 1999-00 – All Patients



B Distribution by Age and Socioeconomic Status in 1999-00 – CHD Patients



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