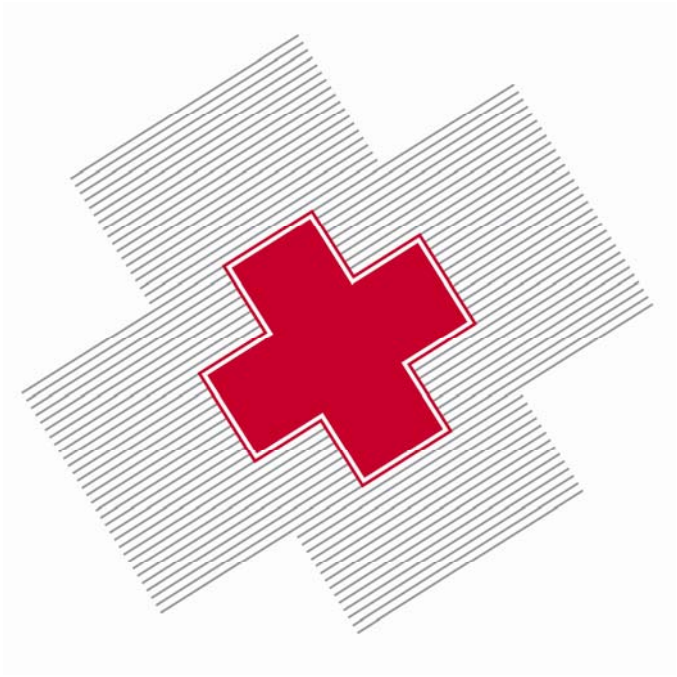


EPIDEMIOLOGICAL ANALYSIS OF

PRIVATE HOSPITAL DEVELOPMENT OPPORTUNITIES

ILLAWARRA INTERNATIONAL HEALTH PRECINCT

August 2008

Hardes and Associates
Strategic Planning for Healthcare
PO Box 5089
Kahibah NSW 2290

HARDES & ASSOCIATES

Hardes and Associates were commissioned by La Vie Developments (Dr Brett Gooley) to undertake a review of unmet private hospital demand in the Illawarra area and the potential to establish a major private tertiary hospital as part of an overall health precinct. Hardes and Associates are the premier hospital demand modelling company in Australia (Appendix 1), with our demand/supply models being used for public hospital planning in every State and the ACT as well as throughout the private sector.

The review was undertaken in 3 stages. Stage 1 reviewed the 'unmet' private hospital demand in the primary catchment – defined as the LGA's of Wollongong, Shellharbour, Shoalhaven and Kiama. Stage 2 modelled future private hospital growth in the catchment under the impacts of population growth, ageing and clinical trends. In Stage 3 we built upon the results from Stages 1 and 2 to identify the potential for the development of a major tertiary private hospital in response to these increasing demand pressures.

This report includes all 3 stages of the analysis.

Under the assumptions modelled in this report it is evident that there is potential for development of a large scale private hospital consistent with the vision outlined by La Vie Developments. Naturally the projections in this report are dependent upon the ability of an operator to attract sufficient clinical (general practitioner, specialist, nursing and other paramedical staff) to the facility. Significant liaison has already occurred with community groups, TAFE and the Wollongong University to ensure that staffing requirements are satisfied.

The proposed development is well located in terms of both access and future population growth. While the nature of the proposed hospital is such that it will have a Regional and wider role rather than simply catering for the local catchment it is important that the site has good access. The current site at West Dapto is well located. It is only 700 metres from the proposed Huntley/Penrose railway station, 800 metres from the old Princes Highway and 1.1km from the Expressway. The development site has flood free road access and is located within a planned urban release area. It is a generally superior site to the original proposed site at Tullimbar.

We have modelled higher than average admission rates (consistent with a well-serviced area) and a strong market share (consistent with expectations for the major private hospital in the area). We have not taken account of potential closure and/or role changes of competing private facilities. A dominant private provider may cause a re-assessment by existing providers. This could significantly increase the projected workload at the proposed development – a consequence that has not been factored into our analyses. We have also taken no account of potential for contracting to provide public hospital services. It is not possible to estimate the extent to which this could generate additional work but the proposed hospital should have some capacity to accommodate this additional source of patients.

We have assumed that the existence of a first class private hospital facility will result in above average rates of private hospital utilisation. This is a reasonable assumption clearly supported by evidence across the state and throughout Australia. We have estimated that admission rates will be at least 10% higher than average. Where the current and projected rates are already more than 10% above the average the existing rate is applied. It should be noted that residents of the only comparable area in New South Wales – the Newcastle/Lake Macquarie area, which has a similar industrial base and socioeconomic status – enjoy private hospital utilisation rates 10% above the State average. This suggests that a target rate of 10% above the State average for the primary catchment of the proposed development is quite reasonable and achievable.

Further, it is also noted that the private hospital utilisation rates in NSW are lower than the National average and substantially lower than States such as Queensland where the private sector plays a much larger role. This suggests that modelling based upon current NSW rates may be slightly conservative.

Our analyses suggest that by 2021, in full operation the proposed development could comprise –

Specialist Medical Centre and Day Procedure Centre (Surgicentre) with approximately 23,500 same day admissions per annum (including Interventional Cardiology) plus 4,000 Renal Dialysis admissions. It would be sensible to support this function with a modest capacity to allow overnight stays where necessary. This greatly increases the range and complexity of work that can be attempted in the

facility – allowing admission of patients where same day discharge is possible but not assured. The inclusion of high dependency/intensive care support would allow Interventional Cardiology to be introduced early in the development.

Free standing Obstetric Unit accommodating approximately 900 deliveries per annum. The projections for this unit show decreasing requirements for beddays consistent with trends towards shorter average stay. However, this may be offset to some extent by increasing deliveries. Data for the past two years have shown a reversal of Australia's decreasing birth rates – and this is not fully factored into projections – as it is not clear that this reversal will continue. With a projected requirement for 4,250 obstetric beddays in 2011 and uncertainty about obstetric trends it would be prudent to plan to accommodate around 4,500 beddays. At occupancy of 65-70% this would require 18 – 20 beds.

Tertiary referral hospital able to accommodate 11,500 overnight admissions (excluding the free standing obstetrics and babies) using approximately 68,000 beddays. Interventional Cardiology would generate around 2,000 admissions, split between same day and overnight. The projection of beddays is dependent upon a continuation of the trends towards decreasing average length of stay for overnight admissions. As the hospital will have a combination of both elective and emergency admissions it needs to have sufficient capacity to accommodate the emergency component without disrupting the elective component. The elective component is effectively managed across 5 days rather than a full week. Both of these factors reduce the overall occupancy. If we assume occupancy of 70% for the overnight admissions, excluding those accommodated in the Obstetric Unit, we have a requirement for 270 beds. If a tertiary private hospital of this size becomes fully operational in the precinct it is likely that at least one private hospital will close and/or change role. This could yield another 50+ beds worth of overnight activity. Further workload could be generated by public-sector contracts. It would be wise to consider these eventualities in planning for this development, suggesting a planning framework within 270-320+ overnight beds, excluding the free-standing Obstetric unit of 20 beds. An allowance should also be made for 10 overnight beds in the day surgery centre and a number of holding beds in the proposed casualty.

Staging of the development would ensure that the supply of services matched the emerging demand and would allow the hospital to progressively develop its reputation and infrastructure.

Our projections are generally consistent with the current scale and timing of the proposed development as outlined below.

Stage 1

Illawarra International Specialist and Surgicentre including 10 overnight beds and two intensive care beds

Stage 2

Pathology and Radiology Units

Stage 3

24 hr Medical Centre, pharmacy and casualty with 10 overnight beds

Stage 4

Stand alone obstetric unit with 20 overnight single bed suites

Stage 5

Illawarra International Hospital with 310 overnight beds

Stage 6

Nurse, resident medical officer and medical student accommodation – integral with the tertiary referral hospital education programme

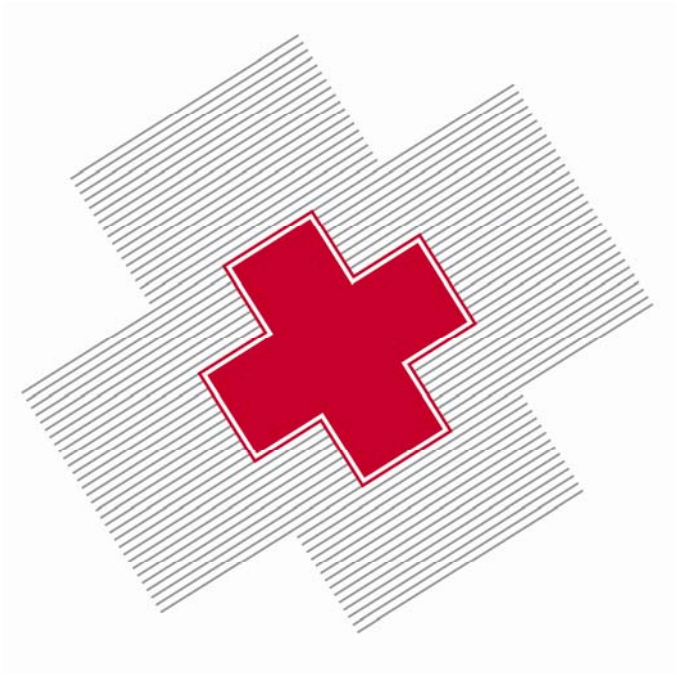
Stage 7

Illawarra International Aged and Disability Centre - with 280 beds, mainly high care. Senior's independent living units.

Stage 8

Educational Facility- with associated accommodation for patient's relatives and outpatient accommodation while undergoing extended therapies.

Dr Greg Hardes (Ph.D.)
Managing Director



REVIEW OF UNMET PRIVATE HOSPITAL DEMAND IN THE ILLAWARRA

ILLAWARRA INTERNATIONAL HEALTH PRECINCT

2005 / 2006

Stage 1 Report

HARDES & ASSOCIATES

BACKGROUND

Hardes and Associates were commissioned by La Vie Developments (Dr Brett Gooley) to undertake a review of unmet private hospital demand in the Illawarra area.

Results will be used to provide objective evidence in relation to the proposed development of the Illawarra International Health Precinct based in Huntley.

METHODOLOGY

There is no agreed method of assessing optimal levels of hospitalisation. Hospital admission rates vary widely within States, between States and Internationally.

In the absence of optimal rates we need to be able to develop alternate methods to determine the expected volume and nature of work from a given population i.e. how many admissions should we expect from a certain population? In particular, in the present review we are interested in the question - is the Illawarra population 'under-serviced 'in terms of private hospital use? From routinely collected hospital morbidity data we can establish a detailed profile of how many and what type of private hospital services are used by Illawarra residents but we still need to determine whether this is an 'expected' level of use.

When we ask this question we identify two distinct ways of increasing the volume of patients at our hospital – increasing market share and/or increasing the overall size of the market.

To establish a test for whether the residents of an area are using services at the 'right' rate we can use the State average admission rates to calculate the 'expected' admissions. Thus, the question we pose is 'if the residents of this area had the same admission rate as the State average (adjusted for age/sex differences) how many admissions would there be?' Note that we are not asking where the admissions would occur (that is a market share issue) nor are we saying that this is the optimal/target admission number. We are simply calculating how many admissions would occur if admissions were at the State average rate.

There are many reasons why the residents of an area may have lower admission rates than the State average. One obvious reason is that by definition half the state will have rates above average (and half below). Even with our best endeavours it is difficult to change the nature of a statistical average! However, we also note that in relation to private hospital admissions, the average includes areas with no private hospitals and/or poor access. It may be anticipated – and this is confirmed by the data - that areas with a good supply of private hospitals will have relatively high private hospital use.

By applying the State average age/sex/specialty/hospital type State average admission rates to a population we can work out how many and what type of admissions that population would generate if they used acute hospital services at the State average. This is not necessarily an optimal rate (and is likely not to be) but it is a good starting point.

To provide a single measure of the difference between the actual number of admissions and the 'expected' number of admissions (using the State average) we calculate a ratio that sets the State average to 100. Hence the Relative Utilisation (RU) is defined as –

100*Actual separations/ 'Expected' separations

This simple ratio has the characteristic that it assigns areas with above-average admission rates with scores above 100 (so an area with an admission rate 40% above the State average has an RU of 140) and areas with below-average admission rates with scores below 100 (so an area with admission rates 25% below the State average with an RU of 75).

In this analysis we undertook a detailed review of the Relative Utilisation of private hospital services by residents of the Illawarra.

CATCHMENT

For analysis purposes the catchment is defined as the LGA's covered by the Illawarra Area Health Service i.e. Wollongong, Shoalhaven, Shellharbour and Kiama.

It is noted that a major hospital development may draw patients from a wider catchment but the core workload would need to be drawn from the primary catchment – and it is here that we need to identify unmet private hospital demand.

RESULTS

PROFILE OF RELATIVE UTILISATION BY LOCAL GOVERNMENT AREA

The following table shows overall private hospital admissions, expected admissions and relative utilisation by residents of each LGA according to stay type.

Same Day Admissions

Hospital_Type	Private		
Stay_Type	Day only		
Place of Residence	Primary Catchment		
	Data		
Place_of_Residence	Separations	Expected Separations	Relative Utilisation
Wollongong	16,244	14,697	111
Shoalhaven	3,876	8,056	48
Shellharbour	4,129	4,554	91
Kiama	2,152	1,695	127
Grand Total	26,401	29,002	91

The results for same day admissions indicate that the residents of Wollongong and Kiama have higher than expected use of private same day services. However, there is a shortfall in Shellharbour and a substantial shortfall in Shoalhaven.

Overnight Admissions

Hospital_Type	Private		
Stay_Type	Overnight+		
Place of Residence	Primary Catchment		
	Data		
Place_of_Residence	Separations	Expected Separations	Relative Utilisation
Wollongong	7,690	7,882	98
Shoalhaven	2,095	4,267	49
Shellharbour	2,107	2,468	85
Kiama	1,028	909	113
Grand Total	12,920	15,526	83

The results for overnight admissions indicate that residents of Kiama use private hospitals at a rate above the State average, Wollongong is marginally below and residents of Shoalhaven and Shellharbour are substantially below state average rates.

Taken together the results indicate that private hospital utilisation across the area is lower than expected – with the shortfall most pronounced in Shellharbour and especially Shoalhaven.

The following tables provide a more detailed analysis showing data for each LGA and stay type for all specialties. It is important to note that even in areas with good overall private utilisation e.g. same day admissions for Wollongong residents (RU = 111) there may still be specialties with relatively low utilisation suggesting possibilities for expansion e.g. (Ophthalmology with RU of 68). Tables should be reviewed in detail to identify potential unmet demand.

PROFILE OF RELATIVE UTILISATION BY SRG

WOLLONGONG
Same Day Admissions

Hospital_Type	Private		
Stay_Type	Day only		
Place_of_Residence	Wollongong		
	Data		
SRG	Separations	Expected Separatio	Relative Utilisation
06 GIT Endodoscopy	4,082	3,410	120
16 Chemotherapy and Radiotherapy	1,756	880	200
40 Non-acute	1,730	1,042	166
20 Dentistry	1,109	624	178
23 Orthopaedics	1,082	977	111
24 Urology	1,044	614	170
14 Ophthamology	1,035	1,527	68
30 Gynaecology	965	1,190	81
26 General Medicine	630	354	178
29 Plastic and Reconstructive Surgery	566	739	77
02 Interventional Cardiology	539	307	176
13 ENT	415	295	141
37 Psychiatry	212	544	39
27 General Surgery	198	254	78
22 Colorectal Surgery	120	223	54
12 Haematology	117	177	66
28 Breast Surgery	106	94	113
25 Vascular Surgery	80	63	127
15 Medical Oncology	73	114	64
01 Cardiology	52	60	86
19 Head and Neck Surgery	52	55	95
18 Dermatology	44	50	87
35 Drug & Alcohol	33	118	28
17 Rheumatology	30	39	77
39 Ungroupable	29	35	83
10 Renal Medicine	26	26	99
07 Neurology	17	38	44
05 Gastroenterology	15	51	30
31 Obstetrics	14	25	55
08 Neurosurgery	14	21	67
03 Cardiothoracic Surgery	14	13	106
11 Renal Dialysis	13	660	2
09 Endocrinology	11	32	35
32 Babies	9	19	47
04 Respiratory Medicine	7	15	46
21 Upper GIT Surgery	3	13	24
36 Burns	2	0	596
34 Tracheostomy	0	0	100
33 Transplantation	0	0	100
38 Acute Rehabilitation	0	0	100
Grand Total	16,244	14,697	111

Overnight Admissions

Hospital_Type	Private		
Stay_Type	Overnight+		
Place_of_Residence	Wollongong		
	Data		
SRG	Separations	Expected Separatio	Relative Utilisation
23 Orthopaedics	924	1,091	85
31 Obstetrics	844	712	118
32 Babies	791	632	125
13 ENT	586	360	163
40 Non-acute	476	413	115
27 General Surgery	459	463	99
30 Gynaecology	422	342	123
21 Upper GIT Surgery	346	249	139
04 Respiratory Medicine	306	414	74
24 Urology	303	384	79
25 Vascular Surgery	207	181	115
08 Neurosurgery	177	184	96
22 Colorectal Surgery	175	154	114
26 General Medicine	174	259	67
02 Interventional Cardiology	174	323	54
29 Plastic and Reconstructive Surgery	166	173	96
28 Breast Surgery	157	135	116
37 Psychiatry	124	163	76
03 Cardiothoracic Surgery	116	113	102
01 Cardiology	89	161	55
06 GIT Endodoscopy	85	119	71
19 Head and Neck Surgery	78	79	99
14 Ophthamology	77	129	60
20 Dentistry	62	26	237
12 Haematology	54	91	60
15 Medical Oncology	52	100	52
07 Neurology	52	119	44
09 Endocrinology	50	51	99
35 Drug & Alcohol	44	49	90
05 Gastroenterology	35	102	34
39 Ungroupable	34	24	143
17 Rheumatology	28	30	94
10 Renal Medicine	15	36	41
18 Dermatology	4	12	34
34 Tracheostomy	3	7	41
36 Burns	1	1	81
16 Chemotherapy and Radiotherapy	0	1	0
11 Renal Dialysis	0	0	0
33 Transplantation	0	0	100
38 Acute Rehabilitation	0	1	0
Grand Total	7,690	7,882	98

SHOALHAVEN

Same Day Admissions

Hospital_Type	Private		
Stay_Type	Day only		
Place_of_Residence	Shoalhaven		
	Data		
SRG	Separations	Expected Separatio	Relative Utilisation
06 GIT Endodoscopy	760	1,919	40
02 Interventional Cardiology	386	186	208
14 Ophthamology	378	931	41
23 Orthopaedics	309	504	61
37 Psychiatry	303	270	112
16 Chemotherapy and Radiotherapy	270	516	52
20 Dentistry	220	270	81
24 Urology	218	340	64
29 Plastic and Reconstructive Surgery	218	415	53
30 Gynaecology	184	512	36
26 General Medicine	90	197	46
40 Non-acute	87	621	14
13 ENT	81	146	56
22 Colorectal Surgery	69	117	59
35 Drug & Alcohol	43	59	73
15 Medical Oncology	41	69	60
27 General Surgery	38	132	29
12 Haematology	38	103	37
28 Breast Surgery	30	47	64
25 Vascular Surgery	20	37	55
39 Ungroupable	12	19	62
17 Rheumatology	12	21	58
18 Dermatology	12	25	48
01 Cardiology	10	35	28
19 Head and Neck Surgery	9	28	32
03 Cardiothoracic Surgery	7	8	89
05 Gastroenterology	7	27	26
10 Renal Medicine	6	16	38
09 Endocrinology	5	18	27
08 Neurosurgery	4	11	36
21 Upper GIT Surgery	3	6	49
04 Respiratory Medicine	3	9	34
07 Neurology	3	21	14
31 Obstetrics	0	10	0
32 Babies	0	10	0
34 Tracheostomy	0	0	100
36 Burns	0	0	0
11 Renal Dialysis	0	402	0
33 Transplantation	0	0	100
38 Acute Rehabilitation	0	0	100
Grand Total	3,876	8,056	48

Overnight Admissions

Hospital_Type	Private		
Stay_Type	Overnight+		
Place_of_Residence	Shoalhaven		
	Data		
SRG	Separations	Expected Separatio	Relative Utilisation
23 Orthopaedics	445	602	74
24 Urology	149	232	64
27 General Surgery	128	255	50
13 ENT	115	174	66
40 Non-acute	113	250	45
26 General Medicine	92	148	62
29 Plastic and Reconstructive Surgery	90	98	92
21 Upper GIT Surgery	85	131	65
25 Vascular Surgery	84	107	78
30 Gynaecology	74	176	42
04 Respiratory Medicine	74	233	32
02 Interventional Cardiology	73	198	37
08 Neurosurgery	63	101	62
14 Ophthamology	62	78	79
22 Colorectal Surgery	50	86	58
37 Psychiatry	47	82	57
06 GIT Endodoscopy	41	72	57
28 Breast Surgery	39	70	56
15 Medical Oncology	33	60	55
01 Cardiology	29	98	30
12 Haematology	26	55	47
20 Dentistry	24	12	198
03 Cardiothoracic Surgery	24	67	36
35 Drug & Alcohol	18	23	77
31 Obstetrics	18	280	6
07 Neurology	16	68	24
32 Babies	16	315	5
09 Endocrinology	15	30	50
19 Head and Neck Surgery	12	43	28
05 Gastroenterology	12	57	21
17 Rheumatology	10	17	59
10 Renal Medicine	9	22	41
39 Ungroupable	6	14	43
18 Dermatology	2	7	29
34 Tracheostomy	1	4	22
16 Chemotherapy and Radiotherapy	0	0	0
36 Burns	0	1	0
11 Renal Dialysis	0	0	0
33 Transplantation	0	0	100
38 Acute Rehabilitation	0	0	0
Grand Total	2,095	4,267	49

SHELLHARBOUR

Same Day Admissions

Hospital_Type	Private		
Stay_Type	Day only		
Place_of_Residence	Shellharbour		
	Data		
SRG	Separations	Expected Separatio	Relative Utilisation
06 GIT Endodoscopy	1,054	1,051	100
16 Chemotherapy and Radiotherapy	415	267	156
23 Orthopaedics	349	313	112
14 Ophthamology	306	430	71
24 Urology	297	189	157
20 Dentistry	295	216	137
30 Gynaecology	243	401	61
26 General Medicine	198	112	177
29 Plastic and Reconstructive Surgery	143	225	64
02 Interventional Cardiology	134	90	148
40 Non-acute	116	302	38
13 ENT	101	106	96
37 Psychiatry	79	177	45
22 Colorectal Surgery	68	71	96
12 Haematology	65	52	124
27 General Surgery	64	84	76
28 Breast Surgery	30	31	97
35 Drug & Alcohol	27	39	70
25 Vascular Surgery	22	19	118
19 Head and Neck Surgery	19	18	106
15 Medical Oncology	14	34	41
18 Dermatology	13	17	77
01 Cardiology	12	18	67
39 Ungroupable	12	11	110
10 Renal Medicine	9	8	117
03 Cardiothoracic Surgery	8	4	202
17 Rheumatology	8	13	64
08 Neurosurgery	7	7	106
07 Neurology	6	12	48
05 Gastroenterology	5	16	31
21 Upper GIT Surgery	2	4	48
04 Respiratory Medicine	2	5	43
31 Obstetrics	2	9	23
32 Babies	2	8	27
09 Endocrinology	2	9	21
34 Tracheostomy	0	0	100
36 Burns	0	0	0
11 Renal Dialysis	0	189	0
33 Transplantation	0	0	100
38 Acute Rehabilitation	0	0	100
Grand Total	4,129	4,554	91

Overnight Admissions

Hospital_Type	Private		
Stay_Type	Overnight+		
Place_of_Residence	Shellharbour		
	Data		
SRG	Separations	Expected Separatio	Relative Utilisation
23 Orthopaedics	244	332	73
31 Obstetrics	214	243	88
13 ENT	205	125	164
32 Babies	191	250	76
27 General Surgery	132	142	93
30 Gynaecology	120	110	109
21 Upper GIT Surgery	108	79	137
40 Non-acute	100	113	89
24 Urology	94	112	84
04 Respiratory Medicine	75	127	59
26 General Medicine	55	77	72
08 Neurosurgery	54	57	95
29 Plastic and Reconstructive Surgery	53	51	105
22 Colorectal Surgery	45	47	96
20 Dentistry	43	8	506
28 Breast Surgery	43	44	98
25 Vascular Surgery	40	52	77
02 Interventional Cardiology	38	93	41
06 GIT Endodoscopy	34	33	103
03 Cardiothoracic Surgery	31	35	90
01 Cardiology	29	44	66
37 Psychiatry	24	52	46
19 Head and Neck Surgery	23	25	93
09 Endocrinology	20	14	142
14 Ophthamology	14	35	40
07 Neurology	13	36	36
35 Drug & Alcohol	11	16	69
05 Gastroenterology	11	30	36
12 Haematology	9	25	36
15 Medical Oncology	9	29	31
39 Ungroupable	7	7	100
17 Rheumatology	6	9	68
34 Tracheostomy	5	2	240
18 Dermatology	3	3	89
10 Renal Medicine	2	10	20
16 Chemotherapy and Radiotherapy	1	0	436
36 Burns	1	0	274
11 Renal Dialysis	0	0	0
33 Transplantation	0	0	100
38 Acute Rehabilitation	0	0	0
Grand Total	2,107	2,468	85

KIAMA

Same Day Admissions

Hospital_Type	Private		
Stay_Type	Day only		
Place_of_Residence	Kiama		
	Data		
SRG	Separations	Expected Separatio	Relative Utilisation
06 GIT Endodoscopy	708	399	177
16 Chemotherapy and Radiotherapy	253	105	240
14 Ophthamology	163	187	87
26 General Medicine	138	41	333
23 Orthopaedics	134	110	122
20 Dentistry	118	63	186
24 Urology	107	71	151
30 Gynaecology	104	120	86
29 Plastic and Reconstructive Surgery	94	87	108
02 Interventional Cardiology	71	37	192
13 ENT	55	32	171
37 Psychiatry	29	60	48
27 General Surgery	26	29	91
22 Colorectal Surgery	25	25	99
12 Haematology	22	21	104
35 Drug & Alcohol	19	13	146
40 Non-acute	14	127	11
28 Breast Surgery	12	10	115
15 Medical Oncology	11	14	81
25 Vascular Surgery	10	7	134
01 Cardiology	5	7	70
39 Ungroupable	5	4	123
21 Upper GIT Surgery	4	1	291
19 Head and Neck Surgery	4	6	65
07 Neurology	4	4	90
05 Gastroenterology	4	6	70
03 Cardiothoracic Surgery	3	2	191
18 Dermatology	3	6	54
31 Obstetrics	2	2	82
17 Rheumatology	2	4	45
10 Renal Medicine	2	3	63
08 Neurosurgery	1	2	42
32 Babies	0	2	0
04 Respiratory Medicine	0	2	0
09 Endocrinology	0	4	0
34 Tracheostomy	0	0	100
36 Burns	0	0	0
11 Renal Dialysis	0	80	0
33 Transplantation	0	0	100
38 Acute Rehabilitation	0	0	100
Grand Total	2,152	1,695	127

Overnight Admissions

Hospital_Type	Private		
Stay_Type	Overnight+		
Place_of_Residence	Kiama		
	Data		
SRG	Separations	Expected Separatio	Relative Utilisation
23 Orthopaedics	157	128	123
13 ENT	74	39	191
27 General Surgery	66	54	123
30 Gynaecology	63	39	162
40 Non-acute	59	52	113
31 Obstetrics	55	68	80
32 Babies	50	69	73
24 Urology	49	46	106
26 General Medicine	40	31	128
25 Vascular Surgery	40	22	182
04 Respiratory Medicine	37	49	76
02 Interventional Cardiology	35	39	89
22 Colorectal Surgery	32	18	178
21 Upper GIT Surgery	30	28	106
06 GIT Endodoscopy	25	15	170
14 Ophthamology	25	16	156
28 Breast Surgery	24	15	156
29 Plastic and Reconstructive Surgery	23	21	111
20 Dentistry	17	3	613
01 Cardiology	17	20	84
08 Neurosurgery	17	21	80
03 Cardiothoracic Surgery	14	13	105
09 Endocrinology	14	6	220
07 Neurology	12	14	83
12 Haematology	9	11	80
19 Head and Neck Surgery	9	9	99
39 Ungroupable	7	3	248
37 Psychiatry	6	18	33
17 Rheumatology	6	4	165
15 Medical Oncology	5	12	41
35 Drug & Alcohol	4	5	76
05 Gastroenterology	4	12	33
34 Tracheostomy	2	1	228
16 Chemotherapy and Radiotherapy	1	0	1,011
18 Dermatology	0	1	0
10 Renal Medicine	0	5	0
36 Burns	0	0	0
11 Renal Dialysis	0	0	0
33 Transplantation	0	0	100
38 Acute Rehabilitation	0	0	0
Grand Total	1,028	909	113

POTENTIAL 'UNMET' PRIVATE DEMAND

To estimate the potential unmet private hospital demand we usually identify the difference between current admissions and 'expected' admissions. However, this simply shows the difference between the current level of use and the level based upon the State average. As we can see from the data, it is common to achieve results well above the State average. As this project is seeking to provide superior services and access we have calculated the difference between the current admissions and a rate 10% above the State average. The following tables show the potential 'unmet' private demand assuming this higher 'target' level of demand. For these purposes we set unmet demand to 0 if the current level is already more than 10% above the State average.

By combining results across the 4 LGA's we can estimate potential unmet private hospital demand.

Potential Same Day Separations

Hospital Type	Private				
Stay Type	Day only				
Potential 'Unmet' Private Demand	Place of Residence				
SRG	Wollongong	Shoalhaven	Shellharbour	Kiama	Total
06 GIT Endodoscopy	0	1,351	102	0	1,453
16 Chemotherapy and Radiotherapy	0	297	0	0	297
40 Non-acute	0	597	216	125	938
20 Dentistry	0	77	0	0	77
23 Orthopaedics	0	245	0	0	245
24 Urology	0	156	0	0	156
14 Ophthamology	645	646	167	43	1,500
30 Gynaecology	344	379	198	29	949
26 General Medicine	0	127	0	0	127
29 Plastic and Reconstructive Surgery	247	238	104	1	591
02 Interventional Cardiology	0	0	0	0	0
13 ENT	0	79	15	0	95
37 Psychiatry	387	0	116	37	540
27 General Surgery	81	107	29	5	222
22 Colorectal Surgery	126	59	10	3	198
12 Haematology	78	76	0	1	155
28 Breast Surgery	0	21	4	0	26
25 Vascular Surgery	0	20	0	0	20
15 Medical Oncology	52	35	23	4	114
01 Cardiology	14	29	8	3	54
19 Head and Neck Surgery	8	22	1	3	33
18 Dermatology	11	15	6	3	35
35 Drug & Alcohol	97	21	15	0	134
17 Rheumatology	13	11	6	3	33
39 Ungroupable	10	9	0	0	19
10 Renal Medicine	3	11	0	1	16
07 Neurology	25	20	8	1	54
05 Gastroenterology	41	22	13	2	78
31 Obstetrics	14	11	7	1	33
08 Neurosurgery	9	8	0	2	19
03 Cardiothoracic Surgery	1	2	0	0	2
11 Renal Dialysis	712	443	208	88	1,451
09 Endocrinology	24	15	8	4	52
32 Babies	12	10	6	2	31
04 Respiratory Medicine	10	7	3	2	22
21 Upper GIT Surgery	11	4	3	0	17
36 Burns	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0
33 Transplantation	0	0	0	0	0
38 Acute Rehabilitation	0	0	0	0	0
Grand Total	2,973	5,173	1,276	363	9,785

Across the area we can identify potential for up to almost 10,000 additional same day private hospital admissions most notably in Ophthalmology, GI Endoscopy and Renal Dialysis.

Potential Overnight Separations and Beddays

Hospital Type	Private					
Stay Type	Overnight+					
Potential 'Unmet' Private Demand	Place of Residence					
SRG	Wollongong	Shoalhaven	Shellharbour	Kiama	Total	Beddays
06 GIT Endodoscopy	46	38	2	0	86	287
16 Chemotherapy and Radiotherapy	1	1	0	0	1	5
40 Non-acute	0	161	24	0	185	2,961
20 Dentistry	0	0	0	0	0	0
23 Orthopaedics	276	217	121	0	614	3,064
24 Urology	119	106	29	2	256	831
14 Ophthamology	64	24	25	0	113	123
30 Gynaecology	0	120	2	0	122	438
26 General Medicine	111	71	30	0	212	976
29 Plastic and Reconstructive Surgery	24	18	3	0	45	158
02 Interventional Cardiology	181	144	64	8	398	1,032
13 ENT	0	76	0	0	76	80
37 Psychiatry	55	43	34	14	146	2,880
27 General Surgery	50	152	24	0	226	726
22 Colorectal Surgery	0	44	6	0	51	378
12 Haematology	46	34	19	3	102	531
28 Breast Surgery	0	38	5	0	43	123
25 Vascular Surgery	0	34	17	0	51	297
15 Medical Oncology	58	33	22	9	122	1,297
01 Cardiology	88	79	20	5	192	1,283
19 Head and Neck Surgery	8	35	4	1	49	96
18 Dermatology	9	5	1	2	17	127
35 Drug & Alcohol	10	8	7	2	26	410
17 Rheumatology	5	9	4	0	17	102
39 Ungroupable	0	9	1	0	10	52
10 Renal Medicine	25	15	9	5	54	263
07 Neurology	79	59	26	4	168	1,626
05 Gastroenterology	78	51	23	9	161	921
31 Obstetrics	0	290	53	20	364	1,896
08 Neurosurgery	26	48	9	6	89	690
03 Cardiothoracic Surgery	9	50	7	1	66	589
11 Renal Dialysis	0	0	0	0	0	0
09 Endocrinology	6	18	0	0	24	169
32 Babies	0	330	84	26	440	2,362
04 Respiratory Medicine	149	182	65	17	412	1,491
21 Upper GIT Surgery	0	60	0	1	61	167
36 Burns	0	1	0	0	1	2
34 Tracheostomy	5	4	0	0	9	193
33 Transplantation	0	0	0	0	0	0
38 Acute Rehabilitation	1	1	0	0	2	2
Grand Total	1,530	2,609	739	135	5,012	28,628

In terms of overnight admissions there is potential for an additional 5,000 admissions, generating 28,600 beddays. This is equivalent to an additional 100 overnight private hospital beds. The shortfall is distributed across a range of specialties.

Total Potential Separations

Hospital Type	Private				
Stay Type	All				
Potential 'Unmet' Private Demand	Place of Residence				
SRG	Wollongong	Shoalhaven	Shellharbour	Kiama	Total
06 GIT Endodoscopy	46	1,389	104	0	1,539
16 Chemotherapy and Radiotherapy	1	298	0	0	299
40 Non-acute	0	758	240	125	1,124
20 Dentistry	0	77	0	0	77
23 Orthopaedics	276	462	121	0	859
24 Urology	119	263	29	2	412
14 Ophthamology	709	670	191	43	1,614
30 Gynaecology	344	499	200	29	1,071
26 General Medicine	111	198	30	0	338
29 Plastic and Reconstructive Surgery	271	256	107	1	636
02 Interventional Cardiology	181	144	64	8	398
13 ENT	0	156	15	0	171
37 Psychiatry	442	43	150	51	685
27 General Surgery	131	259	52	5	448
22 Colorectal Surgery	126	104	17	3	249
12 Haematology	123	110	19	5	257
28 Breast Surgery	0	60	9	0	69
25 Vascular Surgery	0	54	17	0	72
15 Medical Oncology	110	68	46	13	236
01 Cardiology	103	108	27	8	246
19 Head and Neck Surgery	17	56	5	4	82
18 Dermatology	20	21	6	5	52
35 Drug & Alcohol	107	29	22	2	160
17 Rheumatology	18	20	9	3	50
39 Ungroupable	10	19	1	0	29
10 Renal Medicine	28	27	9	6	70
07 Neurology	104	79	34	5	222
05 Gastroenterology	118	74	35	12	239
31 Obstetrics	14	301	61	21	397
08 Neurosurgery	35	57	9	8	108
03 Cardiothoracic Surgery	9	51	7	1	68
11 Renal Dialysis	713	443	208	88	1,451
09 Endocrinology	30	33	8	4	75
32 Babies	12	341	90	28	471
04 Respiratory Medicine	159	189	68	19	434
21 Upper GIT Surgery	11	63	3	1	78
36 Burns	0	1	0	0	2
34 Tracheostomy	5	4	0	0	9
33 Transplantation	0	0	0	0	0
38 Acute Rehabilitation	1	1	0	0	2
Grand Total	4,503	7,782	2,015	498	14,798

The combined data show a shortfall of up to 15,000 private hospital separations per annum. Note however, that this is based upon a target minimum utilisation equal to 10% above the State average.

SUMMARY

There is clear evidence of unmet private hospital demand in the Illawarra precinct as defined by this review. The private relative utilisation in Shellharbour is below the State average and the rates in Shoalhaven are well below average. Rates across Wollongong and Kiama are variable.

If we accept that the State average is not an optimal or target level (and there is plenty of evidence to support this, including the fact that private hospital use in NSW is well below both Victoria and Queensland) we can estimate how much additional private hospital work would be generated from the Illawarra precinct if we set a minimum target of 10% above average. This is not unreasonable for a well serviced area.

Under this scenario we can estimate the private 'shortfall' as approximately 10,000 same day admissions and 5,000 overnight admissions per annum. The 5,000 overnight admissions would generate approximately 28,500 beddays and use 100 beds.

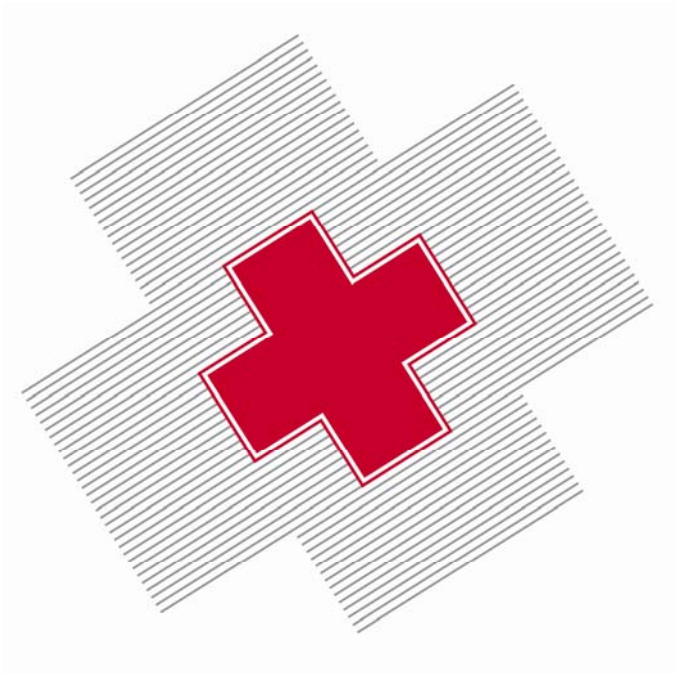
To turn this demand review into a recommendation for potential private hospital development we need to –

1. Compare current private hospital use with projected future demand (based upon population growth, ageing and clinical trends in admission rates and length of stay) – Stage 2

2. Model future demand profile for a new hospital taking account of potential sources of patients including unmet current demand, projected growth in demand and redistribution of patients from existing facilities – Stage 3.

At the present time we can confirm that there is considerable unmet private hospital demand in the primary catchment.

It should be noted that the identification of potential unmet demand does not necessarily mean that this demand can be realised/captured or that any development will be financially viable. The proponents will need to make their own assessments regarding their ability to recruit and support the clinicians and other services and the extent to which any proposed development will be financially viable.



REVIEW OF PROJECTED PRIVATE HOSPITAL DEMAND IN THE ILLAWARRA

ILLAWARRA INTERNATIONAL HEALTH PRECINCT

2005 / 2006 TO 2021/2022

Stage 2 Report

HARDES & ASSOCIATES

BACKGROUND

Hardes and Associates were commissioned by La Vie Developments (Dr Brett Gooley) to undertake a review of unmet private hospital demand in the Illawarra area.

Results will be used to provide objective evidence in relation to the proposed development of the Illawarra International Health Precinct based in Huntley.

In Stage 1 we reported upon unmet private hospital demand in the Illawarra precinct (defined for these purposes as the LGAs of Wollongong, Kiama, Shellharbour and Shoalhaven. This report noted an estimated private 'shortfall' of up to 10,000 same day admissions and 5,000 overnight admissions per annum. The 5,000 overnight admissions would generate approximately 28,500 beddays and use 100 beds. This estimate was based upon a potential achievement, across the catchment, of admission rates 10% higher than State average.

In this report we consider the projected growth in private hospital demand under the impacts of population growth, ageing and clinical trends in admission rates and length of stay.

METHODOLOGY

Data Sources

Data for the demand projections are sourced from the NSW Department of Health. The data are routinely collected hospital morbidity data that are provided on each separation from every acute hospital (public and private).

Data are available annually. In preparing the projections Hardes and Associates use data on the following general fields –

- Year
- Age
- Sex
- Chargeable status (chargeable – that includes all private hospital patients and any category of compensable patient in public hospitals – and non chargeable)
- Same day status (identified by a same day flag)
- Cause of admission/separation (ANDRG or aggregation of ANDRGs into Service Related Groups)
- Place of residence (usually this is based upon Statistical Local Area of Residence)

The other major source of data is the population data. Population data are sourced from the Australian Bureau of Statistics. Estimated Resident Populations according to age/sex/SLA for June 30 of the financial year to which the hospital morbidity data refer are used in the calculation of population-based rates to establish the historic trend parameters. Projected populations are sourced from the appropriate State Health Authority. Only official population projections are used in analyses. Summary population data used for the projections are contained in Appendix 1.

Demand projections

Projecting future demand is fundamental to any attempt to plan future requirements. Unfortunately this aspect of services planning is often poorly done. Demand projections used in this review are based upon the methodology developed by Hardes and Associates and used by State Health Authorities throughout Australia to project future acute hospital demand.

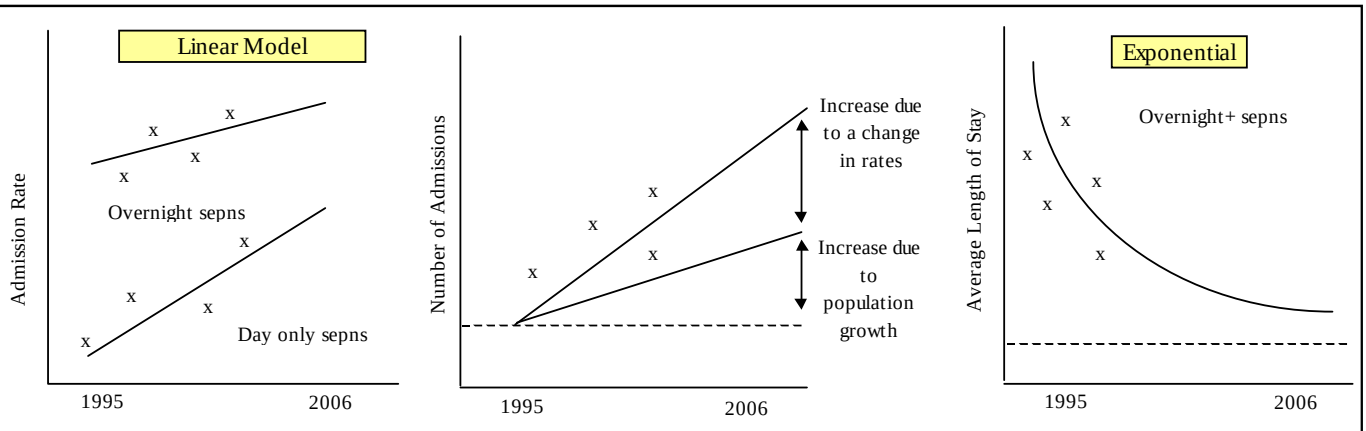
The easiest approach to the projection of future demand is to apply current utilisation rates to population projections. Done correctly this takes full account of population growth and ageing. If there is no change in underlying admission rates i.e. the admission rates are stable over time, then this approach is appropriate.

However, on many occasions the change in underlying admission rates can be an even more important determinant of total admissions than population trends. Change in admission rates reflects a variety of influences including changes in technology (investigations, radiology, pathology, drugs, medication, and surgical techniques), changes in community expectations, funding trends and supply of services. While it is not possible to disaggregate these influences it is important to account for them in any future projections. Since these influences will continue into the future – and since they are reflected in trends in underlying admission rates – it is important that they are incorporated into any modelling. *Conceptually this can be achieved by projecting the specialty specific admission rates – and applying a projected rate to the projected population, and not simply applying the current rate to a projected population.*

This approach recognises that services are evolving and dynamic – and that planning cannot be based upon current year utilisation patterns.

Using the models for demand projection developed by Hardes and Associates we project trends in age/specialty-specific admission rates and length of stay. When we multiply the projected admission rates by the projected population data, the resultant demand projections take into account population growth and ageing as well as specialty-specific trends in admission rates, length of stay and same day admissions. Projections are made for separations and beddays. These demand projections do not indicate where patients will be treated – only the nature and volume of work to be expected from the residents of a given area. At this stage of the review we are only interested in establishing the potential growth in demand within the catchment.

It is important to recognise that these projections outline the volume and type of work that can be anticipated if the population projections are correct and the trends in service utilisation continue into the future. Projections are based upon historic trends. They do not imply that this is the optimal outcome – only that this is the direction in which the system is heading. Interpretation of results needs to be cognizant of this qualification. A conceptual framework is outlined below.



Estimated annual change in admission rates (State)

Current admission rates

Estimated admission rate in 2006 (State)

Regional population projection

Estimated no. of expected admissions for residents of each region in 2006 (Using state norms)

Relative utilisation adjustment

Estimated no. of adjusted admissions for each stay type

Estimated annual change in ALOS of overnight+ admissions

Current ALOS of overnight+ admissions

Estimated ALOS of overnight+ admissions in 2006 (Region)

DEMAND

Estimated no. of day only admissions (region)

Estimated no. of overnight+ admissions

SUPPLY

Inter and intra regional flow

Estimated no. of day only admissions to hospitals in each region

Estimated no. of beddays required by overnight+ admissions to hospitals in each region

Occupancy rates

Estimated no. of beds required by day only admissions to hospitals in each region

Estimated no. of beds required by overnight+ admissions to hospitals in each region

Because we are interested in establishing potential future demand we need to do more than simply projecting trends based upon current levels of supply (which may be inadequate). For example, we have seen from the data that the use of private hospitals by residents in Shoalhaven is well below the State average. There are three basic approaches to projecting demand in these circumstances.

1. Project demand by applying the State average projected rates and rescale the results to be consistent with current levels of Relative Utilisation. In this instance if the residents of any area used services at a level of only 80% of the State average then the projected rates would be rescaled to 80% of the State average. This is a status quo projection. It is a useful representation of what is likely to happen if there is no change in supply of services. However this is not a useful tool for estimating potential future demand.

2. An alternative approach is to ignore the current level of utilisation and simply apply the State average projected rates to the population. In this instance the projection assumes, by default, that any shortfall in current supply/utilisation will be addressed over the coming years. e.g. an area with current utilisation of 80% of the State average would move up to 100% of the State average in future years. This is a better estimate of what growth may be anticipated but still less than optimal.

3. We have seen that it is possible – and common – for areas with good supply of services to obtain admission rates 10% or more above the State average. To estimate potential growth we could consider a reasonable target level as being a minimum level of 10% above the State average. This is consistent with the approach used in Stage 1 of this review. Where the projected rate was already more than 10% above the State average then this projection would be maintained. Where the projected rate is less than 10% above the State average then the projection would be scaled up to a level 10% above the average. This is optimistic but typical of well supplied areas.

For this report we have projected growth using the third approach.

RESULTS

PROFILE OF PROJECTED PRIVATE HOSPITAL DEMAND BY LOCAL GOVERNMENT AREA

The following tables provide a detailed analysis showing *projected private growth* for each LGA and stay type for all specialties. Tables should be reviewed in detail to identify potential growth in each part of the catchment.

WOLLONGONG

Same Day Admissions

Stay Type	Day only
Place of Residence	Wollongong
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	23	31	43	23	31	43
02 Interventional Cardiology	112	215	347	112	215	347
03 Cardiothoracic Surgery	1	1	1	1	1	1
04 Respiratory Medicine	11	12	13	11	12	13
05 Gastroenterology	60	78	98	60	78	98
06 GIT Endodoscopy	45	61	68	45	61	68
07 Neurology	33	41	50	33	41	50
08 Neurosurgery	10	11	12	10	11	12
09 Endocrinology	37	48	62	37	48	62
10 Renal Medicine	13	22	34	13	22	34
11 Renal Dialysis	1,062	1,419	1,869	1,062	1,419	1,869
12 Haematology	175	255	351	175	255	351
13 ENT	12	26	44	12	26	44
14 Ophthamology	1,140	1,622	2,249	1,140	1,622	2,249
15 Medical Oncology	98	140	191	98	140	191
16 Chemotherapy and Radiotherapy	-126	-195	-259	-126	-195	-259
17 Rheumatology	26	37	49	26	37	49
18 Dermatology	10	2	-7	10	2	-7
19 Head and Neck Surgery	28	43	59	28	43	59
20 Dentistry	164	311	462	164	311	462
21 Upper GIT Surgery	17	21	25	17	21	25
22 Colorectal Surgery	165	198	233	165	198	233
23 Orthopaedics	92	169	247	92	169	247
24 Urology	22	59	110	22	59	110
25 Vascular Surgery	10	28	52	10	28	52
26 General Medicine	70	207	358	70	207	358
27 General Surgery	150	209	274	150	209	274
28 Breast Surgery	10	18	26	10	18	26
29 Plastic and Reconstructive Surgery	357	482	627	357	482	627
30 Gynaecology	393	437	469	393	437	469
31 Obstetrics	17	21	24	17	21	24
32 Babies	8	6	5	8	6	5
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	120	144	168	120	144	168
36 Burns	1	1	1	1	1	1
37 Psychiatry	568	724	885	568	724	885
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	99	120	142	99	120	142
40 Non-acute	412	901	1,509	412	901	1,509
Grand Total	5,444	7,924	10,891	5,444	7,924	10,891

Overnight Admissions

Stay Type	Overnight+
Place of Residence	Wollongong
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	117	141	166	887	1,045	1,195
02 Interventional Cardiology	245	303	379	557	687	860
03 Cardiothoracic Surgery	8	7	7	119	130	147
04 Respiratory Medicine	213	255	298	522	525	534
05 Gastroenterology	101	125	154	479	582	714
06 GIT Endodoscopy	42	38	34	128	115	98
07 Neurology	88	101	114	947	1,048	1,174
08 Neurosurgery	50	73	101	250	281	332
09 Endocrinology	16	27	39	119	193	280
10 Renal Medicine	30	36	42	87	102	118
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	56	65	75	339	397	448
13 ENT	-37	-58	-82	-45	-72	-99
14 Ophthamology	69	63	55	76	69	61
15 Medical Oncology	55	54	52	613	576	543
16 Chemotherapy and Radiotherapy	1	1	1	1	1	1
17 Rheumatology	6	6	7	16	8	0
18 Dermatology	9	8	8	121	118	113
19 Head and Neck Surgery	26	41	57	31	40	51
20 Dentistry	-10	-19	-28	-6	-15	-24
21 Upper GIT Surgery	10	19	26	-50	-94	-137
22 Colorectal Surgery	9	13	18	-16	-48	-61
23 Orthopaedics	373	462	572	1,617	1,954	2,465
24 Urology	144	171	198	387	370	348
25 Vascular Surgery	-2	-10	-19	-15	-52	-92
26 General Medicine	154	193	240	533	671	827
27 General Surgery	72	92	115	338	538	779
28 Breast Surgery	13	24	33	-38	-70	-98
29 Plastic and Reconstructive Surgery	22	22	19	42	20	-2
30 Gynaecology	-37	-83	-129	-309	-566	-775
31 Obstetrics	3	24	39	-370	-589	-824
32 Babies	4	31	71	-228	-308	-329
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	6	7	8	97	116	141
35 Drug & Alcohol	24	34	44	437	663	901
36 Burns	0	0	0	0	0	1
37 Psychiatry	125	168	211	2,794	3,994	5,251
38 Acute Rehabilitation	1	1	1	1	1	1
39 Ungroupable	-1	-4	-6	-10	-37	-54
40 Non-acute	135	254	395	1,783	3,259	4,848
Grand Total	2,141	2,685	3,313	12,234	15,655	19,737

WOLLONGONG

Same Day & Overnight Admissions

Stay Type	All
Place of Residence	Wollongong
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	140	172	209	910	1,075	1,238
02 Interventional Cardiology	357	518	725	669	902	1,207
03 Cardiothoracic Surgery	9	8	7	121	131	148
04 Respiratory Medicine	224	268	312	533	537	547
05 Gastroenterology	161	203	251	538	660	812
06 GIT Endodoscopy	87	100	102	172	176	166
07 Neurology	121	141	164	979	1,089	1,224
08 Neurosurgery	60	84	113	261	292	344
09 Endocrinology	54	75	101	156	242	342
10 Renal Medicine	43	58	75	100	124	152
11 Renal Dialysis	1,062	1,419	1,869	1,062	1,419	1,869
12 Haematology	231	319	425	514	652	798
13 ENT	-24	-32	-38	-33	-46	-55
14 Ophthamology	1,209	1,685	2,304	1,217	1,691	2,310
15 Medical Oncology	153	194	242	711	715	733
16 Chemotherapy and Radiotherapy	-126	-195	-259	-126	-195	-259
17 Rheumatology	31	43	56	42	45	49
18 Dermatology	18	10	2	131	120	107
19 Head and Neck Surgery	54	84	116	59	84	110
20 Dentistry	154	292	434	158	296	438
21 Upper GIT Surgery	27	40	51	-33	-73	-112
22 Colorectal Surgery	173	211	251	148	150	172
23 Orthopaedics	465	631	819	1,709	2,123	2,713
24 Urology	167	231	308	410	430	459
25 Vascular Surgery	8	18	33	-5	-24	-40
26 General Medicine	224	399	597	603	878	1,185
27 General Surgery	222	300	389	489	747	1,053
28 Breast Surgery	23	42	59	-28	-51	-71
29 Plastic and Reconstructive Surgery	378	503	646	399	501	625
30 Gynaecology	356	354	340	84	-129	-306
31 Obstetrics	20	45	64	-353	-568	-799
32 Babies	12	37	75	-220	-301	-325
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	6	7	8	97	116	141
35 Drug & Alcohol	144	178	211	557	807	1,069
36 Burns	1	1	2	1	1	2
37 Psychiatry	693	892	1,096	3,362	4,719	6,136
38 Acute Rehabilitation	1	1	1	1	1	1
39 Ungroupable	98	115	136	88	83	88
40 Non-acute	547	1,155	1,904	2,195	4,160	6,357
Grand Total	7,584	10,609	14,204	17,678	23,579	30,628

SHOALHAVEN

Same Day Admissions

Stay Type	Day only
Place of Residence	Shoalhaven
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	36	43	52	36	43	52
02 Interventional Cardiology	81	161	262	81	161	262
03 Cardiothoracic Surgery	2	1	1	2	1	1
04 Respiratory Medicine	8	9	10	8	9	10
05 Gastroenterology	34	46	59	34	46	59
06 GIT Endodoscopy	1,517	1,633	1,762	1,517	1,633	1,762
07 Neurology	26	32	39	26	32	39
08 Neurosurgery	10	11	13	10	11	13
09 Endocrinology	25	33	44	25	33	44
10 Renal Medicine	18	26	35	18	26	35
11 Renal Dialysis	693	968	1,325	693	968	1,325
12 Haematology	143	202	275	143	202	275
13 ENT	100	114	129	100	114	129
14 Ophthamology	1,031	1,423	1,939	1,031	1,423	1,939
15 Medical Oncology	68	101	141	68	101	141
16 Chemotherapy and Radiotherapy	297	304	317	297	304	317
17 Rheumatology	20	27	36	20	27	36
18 Dermatology	16	13	8	16	13	8
19 Head and Neck Surgery	34	43	53	34	43	53
20 Dentistry	155	219	287	155	219	287
21 Upper GIT Surgery	7	10	12	7	10	12
22 Colorectal Surgery	91	115	141	91	115	141
23 Orthopaedics	347	420	494	347	420	494
24 Urology	215	272	340	215	272	340
25 Vascular Surgery	35	50	70	35	50	70
26 General Medicine	174	249	333	174	249	333
27 General Surgery	155	195	241	155	195	241
28 Breast Surgery	29	34	38	29	34	38
29 Plastic and Reconstructive Surgery	333	437	558	333	437	558
30 Gynaecology	405	420	430	405	420	430
31 Obstetrics	12	13	15	12	13	15
32 Babies	9	8	7	9	8	7
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	37	51	65	37	51	65
36 Burns	0	0	0	0	0	0
37 Psychiatry	108	204	301	108	204	301
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	65	82	99	65	82	99
40 Non-acute	853	1,155	1,537	853	1,155	1,537
Grand Total	7,190	9,123	11,467	7,190	9,123	11,467

Overnight Admissions

Stay Type	Overnight+
Place of Residence	Shoalhaven
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	102	123	145	557	645	711
02 Interventional Cardiology	197	248	313	597	791	1,016
03 Cardiothoracic Surgery	53	55	57	559	617	689
04 Respiratory Medicine	233	268	303	857	814	799
05 Gastroenterology	69	88	110	353	467	603
06 GIT Endodoscopy	40	41	41	128	136	149
07 Neurology	69	80	93	333	368	388
08 Neurosurgery	72	93	118	451	556	695
09 Endocrinology	27	35	46	205	256	319
10 Renal Medicine	20	25	31	152	194	223
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	44	53	62	225	288	348
13 ENT	77	73	70	91	89	87
14 Ophthamology	32	33	31	35	34	31
15 Medical Oncology	35	37	38	305	323	335
16 Chemotherapy and Radiotherapy	1	0	0	1	0	0
17 Rheumatology	10	12	13	62	67	78
18 Dermatology	6	6	6	9	9	10
19 Head and Neck Surgery	48	59	70	104	116	130
20 Dentistry	-4	-8	-11	-2	-6	-10
21 Upper GIT Surgery	74	84	91	156	146	136
22 Colorectal Surgery	54	60	65	372	386	409
23 Orthopaedics	323	413	518	2,096	2,753	3,472
24 Urology	132	161	188	358	363	368
25 Vascular Surgery	37	38	37	222	215	197
26 General Medicine	107	141	182	672	857	1,010
27 General Surgery	183	208	235	776	971	1,218
28 Breast Surgery	48	54	59	94	75	59
29 Plastic and Reconstructive Surgery	21	24	26	60	51	37
30 Gynaecology	116	102	84	370	260	158
31 Obstetrics	299	306	314	1,208	1,136	1,075
32 Babies	343	357	377	1,479	1,463	1,468
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	5	6	6	228	282	348
35 Drug & Alcohol	16	22	28	252	367	490
36 Burns	1	1	1	1	1	1
37 Psychiatry	83	108	134	1,640	2,220	2,847
38 Acute Rehabilitation	1	1	1	1	1	1
39 Ungroupable	12	12	12	27	23	18
40 Non-acute	261	354	468	3,058	3,917	4,954
Grand Total	3,246	3,773	4,361	18,091	21,253	24,868

SHOALHAVEN
Same Day & Overnight Admissions

Stay Type	All
Place of Residence	Shoalhaven
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	138	166	197	593	688	764
02 Interventional Cardiology	278	409	575	678	952	1,278
03 Cardiothoracic Surgery	55	56	58	561	618	690
04 Respiratory Medicine	241	277	313	865	824	809
05 Gastroenterology	104	134	169	388	513	661
06 GIT Endodoscopy	1,557	1,674	1,803	1,645	1,769	1,911
07 Neurology	95	112	132	359	400	427
08 Neurosurgery	82	104	131	461	568	707
09 Endocrinology	52	69	89	230	290	363
10 Renal Medicine	38	50	65	170	219	257
11 Renal Dialysis	693	968	1,325	693	968	1,325
12 Haematology	187	255	338	368	490	623
13 ENT	176	187	199	191	203	216
14 Ophthamology	1,063	1,455	1,970	1,065	1,456	1,971
15 Medical Oncology	103	138	179	373	424	475
16 Chemotherapy and Radiotherapy	298	304	317	298	304	317
17 Rheumatology	30	39	49	82	94	114
18 Dermatology	22	19	15	25	22	19
19 Head and Neck Surgery	82	102	123	138	158	182
20 Dentistry	151	212	276	153	214	278
21 Upper GIT Surgery	81	93	103	163	155	148
22 Colorectal Surgery	145	175	207	463	502	551
23 Orthopaedics	671	833	1,012	2,443	3,174	3,966
24 Urology	347	432	528	573	635	708
25 Vascular Surgery	72	89	107	257	265	267
26 General Medicine	281	390	515	846	1,106	1,343
27 General Surgery	337	403	477	931	1,166	1,459
28 Breast Surgery	77	88	97	123	109	97
29 Plastic and Reconstructive Surgery	354	461	583	393	488	595
30 Gynaecology	521	522	514	776	680	588
31 Obstetrics	311	319	329	1,220	1,149	1,089
32 Babies	352	365	383	1,488	1,470	1,475
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	5	6	6	228	282	348
35 Drug & Alcohol	54	74	93	289	418	555
36 Burns	1	1	1	1	1	1
37 Psychiatry	191	312	435	1,749	2,424	3,149
38 Acute Rehabilitation	1	1	1	1	1	1
39 Ungroupable	77	94	111	92	105	117
40 Non-acute	1,114	1,510	2,004	3,911	5,072	6,490
Grand Total	10,436	12,896	15,829	25,281	30,376	36,336

SHELLHARBOUR

Same Day Admissions

Stay Type	Day only
Place of Residence	Shellharbour
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	12	15	19	12	15	19
02 Interventional Cardiology	42	78	119	42	78	119
03 Cardiothoracic Surgery	1	0	0	1	0	0
04 Respiratory Medicine	4	4	5	4	4	5
05 Gastroenterology	20	26	32	20	26	32
06 GIT Endodoscopy	198	215	224	198	215	224
07 Neurology	11	13	16	11	13	16
08 Neurosurgery	1	1	2	1	1	2
09 Endocrinology	14	18	22	14	18	22
10 Renal Medicine	4	7	11	4	7	11
11 Renal Dialysis	343	473	629	343	473	629
12 Haematology	41	71	104	41	71	104
13 ENT	29	30	32	29	30	32
14 Ophthamology	379	565	788	379	565	788
15 Medical Oncology	42	57	74	42	57	74
16 Chemotherapy and Radiotherapy	7	0	-36	7	0	-36
17 Rheumatology	11	14	18	11	14	18
18 Dermatology	6	3	-1	6	3	-1
19 Head and Neck Surgery	9	13	17	9	13	17
20 Dentistry	62	95	123	62	95	123
21 Upper GIT Surgery	5	6	7	5	6	7
22 Colorectal Surgery	28	38	47	28	38	47
23 Orthopaedics	48	69	86	48	69	86
24 Urology	10	12	20	10	12	20
25 Vascular Surgery	7	14	22	7	14	22
26 General Medicine	28	68	109	28	68	109
27 General Surgery	56	73	90	56	73	90
28 Breast Surgery	9	11	12	9	11	12
29 Plastic and Reconstructive Surgery	157	200	247	157	200	247
30 Gynaecology	228	221	206	228	221	206
31 Obstetrics	9	9	10	9	9	10
32 Babies	5	4	3	5	4	3
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	25	32	37	25	32	37
36 Burns	0	0	0	0	0	0
37 Psychiatry	186	231	273	186	231	273
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	31	38	44	31	38	44
40 Non-acute	355	497	663	355	497	663
Grand Total	2,421	3,220	4,073	2,421	3,220	4,073

Overnight Admissions

Stay Type	Overnight+
Place of Residence	Shellharbour
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	34	44	54	125	157	186
02 Interventional Cardiology	95	118	145	323	412	525
03 Cardiothoracic Surgery	10	11	10	121	145	165
04 Respiratory Medicine	96	110	123	252	261	267
05 Gastroenterology	33	41	51	316	415	531
06 GIT Endodoscopy	5	6	5	14	15	11
07 Neurology	32	37	41	284	330	391
08 Neurosurgery	21	29	38	132	156	184
09 Endocrinology	5	10	14	37	66	96
10 Renal Medicine	12	14	17	190	235	294
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	25	29	33	132	157	179
13 ENT	-2	-19	-33	-1	-21	-35
14 Ophthamology	31	31	29	45	47	45
15 Medical Oncology	25	25	25	311	307	294
16 Chemotherapy and Radiotherapy	0	0	0	-1	-1	-1
17 Rheumatology	5	5	5	15	22	26
18 Dermatology	1	1	1	3	3	2
19 Head and Neck Surgery	12	17	21	14	16	18
20 Dentistry	-9	-18	-26	-2	-12	-21
21 Upper GIT Surgery	5	5	3	-4	-22	-39
22 Colorectal Surgery	13	14	15	85	85	81
23 Orthopaedics	181	213	247	651	777	935
24 Urology	50	62	71	105	106	100
25 Vascular Surgery	21	21	19	74	58	40
26 General Medicine	49	64	80	343	458	610
27 General Surgery	42	49	55	113	153	207
28 Breast Surgery	11	14	15	9	0	-9
29 Plastic and Reconstructive Surgery	7	10	11	44	54	54
30 Gynaecology	-3	-16	-32	-61	-139	-207
31 Obstetrics	69	63	55	240	113	-9
32 Babies	97	90	86	424	323	242
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	1	2	2	28	46	63
35 Drug & Alcohol	12	15	17	293	388	477
36 Burns	0	0	0	13	12	10
37 Psychiatry	61	73	84	1,440	1,814	2,169
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	3	3	2	8	7	6
40 Non-acute	78	123	173	1,151	1,745	2,372
Grand Total	1,130	1,291	1,453	7,269	8,689	10,259

SHELLHARBOUR
Same Day & Overnight Admissions

Stay Type	All
Place of Residence	Shellharbour
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	46	59	73	137	173	205
02 Interventional Cardiology	137	196	264	365	489	644
03 Cardiothoracic Surgery	11	11	11	122	145	165
04 Respiratory Medicine	100	115	127	256	265	272
05 Gastroenterology	53	67	82	337	441	562
06 GIT Endodoscopy	203	220	229	212	230	235
07 Neurology	43	50	58	295	344	407
08 Neurosurgery	22	30	39	134	157	185
09 Endocrinology	19	27	36	51	84	118
10 Renal Medicine	15	21	27	194	242	305
11 Renal Dialysis	343	473	629	343	473	629
12 Haematology	66	100	137	172	228	284
13 ENT	27	11	-1	27	10	-3
14 Ophthamology	410	596	817	424	612	833
15 Medical Oncology	66	82	99	352	364	367
16 Chemotherapy and Radiotherapy	7	0	-37	6	-1	-38
17 Rheumatology	16	19	23	26	36	44
18 Dermatology	7	4	0	9	5	1
19 Head and Neck Surgery	20	29	38	22	29	35
20 Dentistry	53	76	97	60	83	102
21 Upper GIT Surgery	10	11	10	1	-16	-32
22 Colorectal Surgery	41	52	62	113	123	128
23 Orthopaedics	229	282	332	699	846	1,020
24 Urology	60	74	90	116	118	120
25 Vascular Surgery	28	34	40	81	71	62
26 General Medicine	77	132	190	371	526	719
27 General Surgery	98	122	146	169	226	298
28 Breast Surgery	20	25	26	18	11	3
29 Plastic and Reconstructive Surgery	164	210	258	201	254	301
30 Gynaecology	225	204	175	167	81	-1
31 Obstetrics	78	72	65	249	123	1
32 Babies	102	94	89	429	327	245
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	1	2	2	28	46	63
35 Drug & Alcohol	38	47	54	318	420	514
36 Burns	0	0	0	13	12	10
37 Psychiatry	247	304	357	1,626	2,045	2,442
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	34	41	47	39	45	50
40 Non-acute	433	619	836	1,505	2,241	3,035
Grand Total	3,550	4,510	5,526	9,689	11,909	14,332

KIAMA

Same Day Admissions

Stay Type	Day only
Place of Residence	Kiama
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	4	5	7	4	5	7
02 Interventional Cardiology	16	31	52	16	31	52
03 Cardiothoracic Surgery	0	0	0	0	0	0
04 Respiratory Medicine	2	2	2	2	2	2
05 Gastroenterology	5	7	9	5	7	9
06 GIT Endodoscopy	4	8	-3	4	8	-3
07 Neurology	2	3	4	2	3	4
08 Neurosurgery	2	2	2	2	2	2
09 Endocrinology	6	7	9	6	7	9
10 Renal Medicine	3	4	6	3	4	6
11 Renal Dialysis	131	179	242	131	179	242
12 Haematology	16	30	48	16	30	48
13 ENT	4	6	9	4	6	9
14 Ophthamology	103	169	260	103	169	260
15 Medical Oncology	10	15	22	10	15	22
16 Chemotherapy and Radiotherapy	-20	-50	-67	-20	-50	-67
17 Rheumatology	4	6	7	4	6	7
18 Dermatology	3	2	1	3	2	1
19 Head and Neck Surgery	5	7	8	5	7	8
20 Dentistry	17	30	44	17	30	44
21 Upper GIT Surgery	1	1	2	1	1	2
22 Colorectal Surgery	8	12	16	8	12	16
23 Orthopaedics	13	22	33	13	22	33
24 Urology	7	14	23	7	14	23
25 Vascular Surgery	3	4	7	3	4	7
26 General Medicine	9	25	43	9	25	43
27 General Surgery	14	20	28	14	20	28
28 Breast Surgery	1	2	3	1	2	3
29 Plastic and Reconstructive Surgery	19	37	59	19	37	59
30 Gynaecology	34	34	33	34	34	33
31 Obstetrics	1	1	1	1	1	1
32 Babies	2	2	1	2	2	1
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	5	9	13	5	9	13
36 Burns	0	0	0	0	0	0
37 Psychiatry	59	76	92	59	76	92
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	16	19	23	16	19	23
40 Non-acute	166	218	285	166	218	285
Grand Total	672	962	1,324	672	962	1,324

Overnight Admissions

Stay Type	Overnight+
Place of Residence	Kiama
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	9	12	15	33	37	45
02 Interventional Cardiology	16	25	36	60	86	122
03 Cardiothoracic Surgery	2	2	2	22	33	46
04 Respiratory Medicine	25	30	35	54	59	66
05 Gastroenterology	12	15	19	104	124	148
06 GIT Endodoscopy	0	1	2	14	21	34
07 Neurology	5	7	8	41	59	78
08 Neurosurgery	10	13	17	46	57	73
09 Endocrinology	1	3	5	4	10	16
10 Renal Medicine	6	6	7	6	6	7
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	5	6	7	18	24	31
13 ENT	-1	-4	-6	5	1	-1
14 Ophthamology	0	-2	-3	4	2	0
15 Medical Oncology	8	8	8	64	68	62
16 Chemotherapy and Radiotherapy	-1	-1	-1	-3	-3	-3
17 Rheumatology	0	0	0	7	5	1
18 Dermatology	2	2	2	2	2	2
19 Head and Neck Surgery	3	5	7	5	6	7
20 Dentistry	-3	-6	-9	0	-4	-7
21 Upper GIT Surgery	4	5	7	8	7	7
22 Colorectal Surgery	2	3	4	2	-5	-11
23 Orthopaedics	18	34	55	107	217	374
24 Urology	6	10	15	26	31	37
25 Vascular Surgery	-1	-2	0	-63	-65	-64
26 General Medicine	4	9	14	17	34	59
27 General Surgery	3	7	12	19	43	75
28 Breast Surgery	2	3	4	-7	-13	-20
29 Plastic and Reconstructive Surgery	0	0	0	32	33	31
30 Gynaecology	-3	-8	-18	-50	-90	-133
31 Obstetrics	23	23	23	82	54	30
32 Babies	25	26	28	106	92	86
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	1	1	2	43	68	89
35 Drug & Alcohol	4	4	5	56	75	94
36 Burns	0	0	0	0	0	0
37 Psychiatry	22	26	30	418	530	651
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	1	1	1	-8	-15	-20
40 Non-acute	19	39	65	297	565	870
Grand Total	227	303	399	1,569	2,153	2,880

KIAMA

Same Day & Overnight Admissions

Stay Type	All
Place of Residence	Kiama
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	13	17	22	38	43	51
02 Interventional Cardiology	32	56	88	76	118	174
03 Cardiothoracic Surgery	2	2	2	22	33	46
04 Respiratory Medicine	27	32	37	56	61	68
05 Gastroenterology	17	22	28	108	131	157
06 GIT Endodoscopy	5	9	-2	19	29	30
07 Neurology	7	9	12	43	61	82
08 Neurosurgery	12	15	19	48	59	75
09 Endocrinology	7	10	14	9	17	25
10 Renal Medicine	8	10	13	8	10	13
11 Renal Dialysis	131	179	242	131	179	242
12 Haematology	21	36	55	34	54	78
13 ENT	3	2	3	8	7	8
14 Ophthamology	102	168	257	107	171	260
15 Medical Oncology	18	24	31	73	84	85
16 Chemotherapy and Radiotherapy	-21	-50	-68	-24	-53	-71
17 Rheumatology	5	6	7	12	11	8
18 Dermatology	4	4	3	4	4	3
19 Head and Neck Surgery	8	12	15	10	13	15
20 Dentistry	14	24	35	17	26	36
21 Upper GIT Surgery	4	7	9	9	9	9
22 Colorectal Surgery	10	14	19	10	6	5
23 Orthopaedics	31	56	87	120	238	407
24 Urology	12	24	38	32	45	60
25 Vascular Surgery	2	3	6	-61	-61	-58
26 General Medicine	13	34	57	26	60	102
27 General Surgery	17	27	40	33	64	103
28 Breast Surgery	4	6	7	-5	-11	-17
29 Plastic and Reconstructive Surgery	18	37	59	50	70	90
30 Gynaecology	30	26	15	-16	-57	-100
31 Obstetrics	24	24	24	83	55	32
32 Babies	27	27	30	108	94	87
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	1	1	2	43	68	89
35 Drug & Alcohol	8	13	18	61	84	107
36 Burns	0	0	0	0	0	0
37 Psychiatry	81	102	123	477	605	743
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	16	20	24	8	4	3
40 Non-acute	186	258	350	463	783	1,155
Grand Total	899	1,264	1,722	2,241	3,114	4,204

OVERALL POTENTIAL PROJECTED PRIVATE HOSPITAL DEMAND GROWTH

By combining results across the 4 LGA's we can estimate potential projected private hospital demand growth.

Projected Same Day Growth for Admissions and Beddays

Stay Type	Day only					
Place of Residence	Catchment					
Hospital Type	Private					
	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	75	94	122	75	94	122
02 Interventional Cardiology	251	485	780	251	485	780
03 Cardiothoracic Surgery	4	3	2	4	3	2
04 Respiratory Medicine	26	28	31	26	28	31
05 Gastroenterology	119	156	197	119	156	197
06 GIT Endodoscopy	1,764	1,917	2,051	1,764	1,917	2,051
07 Neurology	71	89	109	71	89	109
08 Neurosurgery	23	25	28	23	25	28
09 Endocrinology	81	107	137	81	107	137
10 Renal Medicine	38	58	84	38	58	84
11 Renal Dialysis	2,229	3,039	4,064	2,229	3,039	4,064
12 Haematology	375	558	778	375	558	778
13 ENT	145	177	214	145	177	214
14 Ophthamology	2,653	3,779	5,237	2,653	3,779	5,237
15 Medical Oncology	218	313	427	218	313	427
16 Chemotherapy and Radiotherapy	157	59	-46	157	59	-46
17 Rheumatology	61	84	110	61	84	110
18 Dermatology	35	19	2	35	19	2
19 Head and Neck Surgery	75	106	137	75	106	137
20 Dentistry	398	655	915	398	655	915
21 Upper GIT Surgery	30	38	46	30	38	46
22 Colorectal Surgery	291	362	437	291	362	437
23 Orthopaedics	501	679	860	501	679	860
24 Urology	254	357	493	254	357	493
25 Vascular Surgery	54	97	150	54	97	150
26 General Medicine	281	550	843	281	550	843
27 General Surgery	375	497	634	375	497	634
28 Breast Surgery	49	65	79	49	65	79
29 Plastic and Reconstructive Surgery	865	1,155	1,491	865	1,155	1,491
30 Gynaecology	1,061	1,112	1,138	1,061	1,112	1,138
31 Obstetrics	39	45	51	39	45	51
32 Babies	24	19	16	24	19	16
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	188	235	283	188	235	283
36 Burns	1	1	2	1	1	2
37 Psychiatry	922	1,235	1,551	922	1,235	1,551
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	210	258	309	210	258	309
40 Non-acute	1,786	2,771	3,994	1,786	2,771	3,994
Grand Total	15,727	21,228	27,755	15,727	21,228	27,755

It is clear that there is potential for substantial growth in same day private hospital admissions across the primary catchment – up to an additional 21,000 same day separations over the next decade. Most significant growth is in Ophthalmology, Renal Dialysis, GIT Endoscopy, Plastic Surgery and Gynaecology.

Projected Overnight+ Growth for Admissions and Beddays

Stay Type	Overnight+					
Place of Residence	Catchment					
Hospital Type	Private					
	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	262	320	380	1,602	1,885	2,137
02 Interventional Cardiology	554	695	873	1,537	1,976	2,524
03 Cardiothoracic Surgery	74	74	76	821	924	1,047
04 Respiratory Medicine	566	664	758	1,684	1,659	1,665
05 Gastroenterology	216	269	333	1,252	1,589	1,996
06 GIT Endodoscopy	88	86	81	283	288	291
07 Neurology	194	224	257	1,604	1,805	2,031
08 Neurosurgery	153	208	274	881	1,050	1,283
09 Endocrinology	50	75	104	364	525	711
10 Renal Medicine	67	81	96	434	537	642
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	129	152	177	713	866	1,006
13 ENT	37	-8	-51	49	-3	-47
14 Ophthamology	131	124	112	160	152	137
15 Medical Oncology	123	124	123	1,292	1,275	1,233
16 Chemotherapy and Radiotherapy	1	0	0	-2	-3	-4
17 Rheumatology	21	23	25	101	102	104
18 Dermatology	17	17	17	135	132	127
19 Head and Neck Surgery	89	121	155	155	178	206
20 Dentistry	-26	-52	-74	-10	-36	-62
21 Upper GIT Surgery	93	113	127	110	38	-34
22 Colorectal Surgery	77	89	102	443	419	419
23 Orthopaedics	895	1,122	1,391	4,470	5,701	7,247
24 Urology	332	403	472	876	871	854
25 Vascular Surgery	56	47	37	218	156	81
26 General Medicine	314	406	516	1,565	2,020	2,506
27 General Surgery	300	355	417	1,246	1,706	2,279
28 Breast Surgery	75	95	110	57	-8	-67
29 Plastic and Reconstructive Surgery	49	56	55	178	158	120
30 Gynaecology	72	-5	-95	-50	-536	-957
31 Obstetrics	394	416	431	1,161	714	272
32 Babies	469	504	561	1,781	1,571	1,467
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	13	15	18	396	512	641
35 Drug & Alcohol	57	76	94	1,038	1,493	1,962
36 Burns	1	1	1	14	13	12
37 Psychiatry	290	375	459	6,293	8,557	10,918
38 Acute Rehabilitation	2	2	2	2	2	2
39 Ungroupable	15	11	9	17	-22	-50
40 Non-acute	493	771	1,101	6,290	9,485	13,044
Grand Total	6,743	8,051	9,527	39,163	47,750	57,744

There is also significant projected private growth in private overnight admissions – though less than for same day admissions – as a result of different clinical trends. An additional 8,000 separations over the next decade would generate a projected increase of 48,000 beddays, with growth in beddays offset to some extent by projected decreases in average length of stay. The projected increase of 48,000 beddays represents approximately 160 overnight beds.

Projected Total Growth for Admissions and Beddays

Stay Type	All
Place of Residence	Catchment
Hospital Type	Private

	Projected Growth in Admissions			Projected Growth in Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	337	414	501	1,678	1,979	2,258
02 Interventional Cardiology	805	1,179	1,653	1,787	2,460	3,304
03 Cardiothoracic Surgery	77	77	78	825	927	1,049
04 Respiratory Medicine	592	692	789	1,710	1,687	1,696
05 Gastroenterology	334	426	530	1,371	1,745	2,193
06 GIT Endodoscopy	1,852	2,003	2,132	2,047	2,205	2,342
07 Neurology	265	313	366	1,676	1,894	2,140
08 Neurosurgery	176	233	302	904	1,076	1,311
09 Endocrinology	131	182	241	446	632	848
10 Renal Medicine	105	139	181	472	596	727
11 Renal Dialysis	2,230	3,039	4,065	2,230	3,039	4,065
12 Haematology	504	710	955	1,088	1,424	1,784
13 ENT	182	169	163	194	174	167
14 Ophthamology	2,784	3,903	5,349	2,813	3,931	5,374
15 Medical Oncology	341	437	550	1,510	1,587	1,661
16 Chemotherapy and Radiotherapy	158	60	-46	155	56	-50
17 Rheumatology	81	107	135	161	186	214
18 Dermatology	51	36	19	170	152	129
19 Head and Neck Surgery	165	227	292	230	284	343
20 Dentistry	372	603	841	388	619	854
21 Upper GIT Surgery	123	150	173	140	75	12
22 Colorectal Surgery	368	451	539	734	781	856
23 Orthopaedics	1,395	1,801	2,251	4,971	6,381	8,106
24 Urology	586	761	965	1,130	1,228	1,347
25 Vascular Surgery	110	144	187	272	252	231
26 General Medicine	595	956	1,359	1,846	2,569	3,349
27 General Surgery	675	852	1,052	1,621	2,203	2,913
28 Breast Surgery	124	161	190	107	58	12
29 Plastic and Reconstructive Surgery	915	1,211	1,546	1,044	1,313	1,611
30 Gynaecology	1,133	1,107	1,043	1,010	576	181
31 Obstetrics	433	461	482	1,199	759	323
32 Babies	493	523	577	1,805	1,590	1,483
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	13	15	18	396	512	641
35 Drug & Alcohol	244	311	377	1,226	1,728	2,245
36 Burns	2	2	3	15	14	13
37 Psychiatry	1,212	1,610	2,010	7,215	9,793	12,469
38 Acute Rehabilitation	2	2	2	2	2	2
39 Ungroupable	225	270	318	227	237	259
40 Non-acute	2,279	3,542	5,095	8,076	12,256	17,038
Grand Total	22,470	29,280	37,281	54,889	68,979	85,499

This table is included for completeness only. As the requirements for same day admissions are different to those for overnight admissions planning is usually undertaken separately for each component – but the summary shows the significant private growth potential that exists.

SUMMARY

This stage of the review considers the potential private hospital growth that may be achieved across the primary catchment. It builds upon the analysis undertaken in Stage 1 (that quantified existing 'unmet demand').

The results indicate that, subject to available supply (of both capital and clinical resources) there could be significant private growth over the next decade. Growth of up to 21,000 same day separations and an additional 8,000 overnight separations could be achieved over the next decade. This would yield an additional 48,000 beddays. The projected increase of 48,000 beddays represents approximately 160 overnight private hospital beds.

Several points need to be considered.

1. The projected growth is based upon achievement of rates higher than the projected State average. This is possible but requires corresponding growth/investment in capital resources and corresponding increase in clinical support. In the absence of increased supply the growth will not be achieved.

2. The projected growth assumes that the shortfalls identified in Stage 1 will be addressed.

3. Growth will not necessarily be captured by a new provider. It should be anticipated that existing and/or other new providers will seek to capture some of the growth. This will reduce demand at the proposed new hospital.

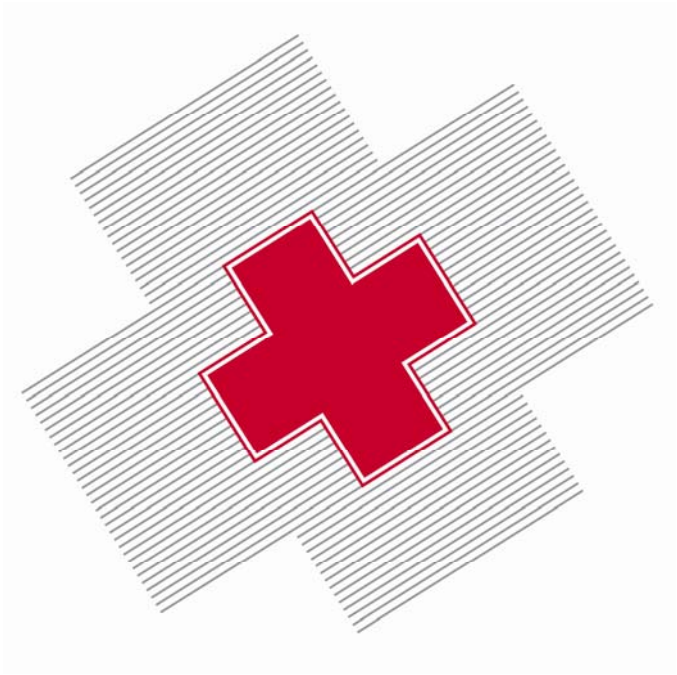
4. The catchment of the proposed new hospital will exceed the primary catchment identified here – and will include the south-eastern corner of NSW and the north-eastern corner of Victoria. This will increase demand at the proposed hospital.

Points 3 and 4 will be specifically addressed in Stage 3 of this review when we model the impact of likely patient flows/market share assumptions – generating a projected clinical profile for the proposed hospital.

Appendix 1

Summary population projections

Population	Year							
LGA_Name	1996	2001	2006	2011	2016	2021	2026	2031
Kiama	18,390	19,970	21,220	21,980	22,660	23,430	24,110	24,890
Shellharbour	53,898	59,910	65,350	70,020	70,830	71,040	71,440	72,010
Shoalhaven	79,168	87,700	95,620	102,680	109,420	116,210	119,880	129,500
Wollongong	183,448	189,770	194,270	199,810	208,190	216,660	224,520	231,540
Grand Total	334,904	357,350	376,460	394,490	411,100	427,340	439,950	457,940



PRIVATE HOSPITAL DEVELOPMENT OPPORTUNITIES

ILLAWARRA INTERNATIONAL HEALTH PRECINCT

OCTOBER 2007

Stage 3 Report

SUMMARY

Hardes and Associates were commissioned by La Vie Developments (Dr Brett Gooley) to undertake a review of unmet private hospital demand in the Illawarra area and the potential to establish a major private tertiary hospital as part of an overall health precinct in West Dapto.

The proposed development has received strong support from the Faculty of Health and Behavioural Sciences, University of Wollongong.

Because of limited development in the private sector there has been an ongoing difficulty in attracting clinicians. By establishing a major tertiary referral hospital, with the associated supporting infrastructure, the developer is seeking to provide a working environment that is attractive to clinicians. If this strategy is successful it will not only greatly enhance the private sector but will also expand the pool of clinicians available to the public sector. It would also significantly enhance the limited clinical training opportunities across the area.

In this report we make market share assumptions consistent with the role proposed for the development. Market share assumptions are applied to the primary catchment and these estimates are inflated to take account of additional work that can be anticipated from outside the primary catchment.

Assumptions about market shares need to be carefully considered. The projections will only be as valid as the market share assumptions underpinning them. Our indicative market share assumptions are –

1. Same day admissions

These services are provided by existing private hospitals as well as a local same day clinic in Wollongong. It will be difficult to capture same day work from Wollongong – and also difficult to defend as new competitors are attracted to the market. It is assumed that the proposed hospital will capture the following same day market shares –

Wollongong 30%
Shellharbour.....60%
Kiama.....80%
Shoalhaven 45%

The hospital will capture 90% of Renal Dialysis as it is currently not provided in the local private sector.

2. Overnight admissions

The proposed hospital will be the major provider of tertiary private hospital services in the Region. This will not only result in capture of a high proportion of tertiary work currently being referred elsewhere but will also attract high proportions of non-tertiary work. There is a tendency for clinicians to preferentially refer to hospitals where there are high levels of support. For the modelling it has been assumed that the proposed hospital will capture the following overnight market shares –

Wollongong 30%
Shellharbour.....70%
Kiama.....85%
Shoalhaven 50%

For Cardiothoracic Surgery, Interventional Cardiology and Neurosurgery it is assumed that the hospital will capture 30% of the Wollongong market but 80% of the Shellharbour, Kiama and Shoalhaven market.

We have also assumed that the existence of a first class private hospital facility will result in above average rates of private hospital utilisation. This is a reasonable assumption clearly supported by evidence across the state and throughout Australia. We have estimated that admission rates will be at least 10% higher than average. Where the current and projected rates are already more than 10%

above the average the existing rate is applied. It should be noted that residents of the only comparable area in New South Wales – the Newcastle/Lake Macquarie area, which is comparable in terms of industrial base and socioeconomic status – enjoy private hospital utilisation rates 10% above the State average. This suggests that a target rate of 10% above the State average for the primary catchment of the proposed development is quite reasonable and achievable.

Further, it is noted that the private hospital utilisation rates in NSW are lower than the National average and substantially lower than States such as Queensland where the private sector plays a much larger role.

If the operator is able to establish high quality tertiary services it is reasonable to expect the catchment to expand to include a significant portion of north eastern Victoria and south eastern NSW (where it would compete with Sydney Metropolitan and ACT hospitals for patients). Typically tertiary referral hospitals attract a significant share of their work from outside their primary catchment – and this work covers both tertiary and non-tertiary admissions. The expanded catchment tends to mainly occur for overnight admissions though there is also an impact on same day admissions.

To estimate the impact of the tertiary role on the overall hospital volumes we have assumed that 10% of same day admissions and 20% of overnight admissions come from outside the primary catchment.

Under the assumptions modelled in this report it is evident that there is potential for development of a large scale private hospital consistent with the vision outlined by La Vie Developments. Naturally the projections in this report are dependent upon the ability of an operator to attract sufficient clinical (general practitioner, specialist, nursing and other paramedical staff) to the facility. Significant liaison has already occurred with community groups, TAFE and the Wollongong University to ensure that staffing requirements are satisfied.

To some extent the projections and modelling may be regarded as ambitious – we have modelled higher than average admission rates (consistent with a well-serviced area) and a strong market share (consistent with expectations for the major private hospital in the area). On the other hand we have not taken account of potential closure and/or role changes of competing private facilities. This is a possibility, especially in the Wollongong and Shellharbour markets. A dominant private provider may cause a re-assessment by existing providers. This would significantly increase the projected workload at the proposed development – a consequence that has not been factored into our analyses. We have also taken no account of potential for contracting to provide public hospital services. It is not possible to estimate the extent to which this could generate additional work but the proposed hospital should have some capacity to accommodate this additional source of patients.

By 2021, in full operation the proposed development could comprise –

Specialist Medical Centre and Day Procedure Centre (Surgicentre) with approximately 23,500 same day admissions per annum (including Interventional Cardiology) plus 4,000 Renal Dialysis admissions. It would be sensible to support this function with a modest capacity to allow overnight stays where necessary. This greatly increases the range and complexity of work that can be attempted in the facility – allowing admission of patients where same day discharge is possible but not assured. The inclusion of high dependency/intensive care support would allow Interventional Cardiology to be introduced early in the development.

Free standing Obstetric Unit accommodating approximately 900 deliveries per annum. The projections for this unit show decreasing requirements for beddays consistent with trends towards shorter average stay. However, this may be offset to some extent by increasing deliveries. Data for the past two years have shown a reversal of Australia's decreasing birth rates – and this is not fully factored into projections – as it is not clear that this reversal will continue. With a projected requirement for 4,250 obstetric beddays in 2011 and uncertainty about obstetric trends it would be prudent to plan to accommodate around 4,500 beddays. At occupancy of 65-70% this would require 18 – 20 beds.

Tertiary referral hospital able to accommodate 11,500 overnight admissions (excluding the free standing obstetrics and babies) using approximately 68,000 beddays. Interventional Cardiology would generate around 2,000 admissions, split between same day and overnight. The projection of beddays

is dependent upon a continuation of the trends towards decreasing average length of stay for overnight admissions. As the hospital will have a combination of both elective and emergency admissions it needs to have sufficient capacity to accommodate the emergency component without disrupting the elective component. The elective component is effectively managed across 5 days rather than a full week. Both of these factors reduce the overall occupancy. If we assume occupancy of 70% for the overnight admissions, excluding those accommodated in the Obstetric Unit, we have a requirement for 270 beds. If a tertiary private hospital of this size becomes fully operational in the precinct it is likely that at least one private hospital will close and/or change role. This could yield another 50+ beds worth of overnight activity. Further workload could be generated by public-sector contracts. It would be wise to consider these eventualities in planning for this development, suggesting a planning framework within 270-320+ overnight beds, excluding the free-standing Obstetric unit of 20 beds. An allowance should also be made for 10 overnight beds in the day surgery centre and a number of holding beds in the proposed casualty.

Staging of the development would ensure that the supply of services matched the emerging demand and would allow the hospital to progressively develop its reputation and infrastructure.

The projections are generally consistent with the current scale and timing of the proposed development as outlined below.

Stage 1

Illawarra International Specialist and Surgicentre including 10 overnight beds and two intensive care beds

Stage 2

Pathology and Radiology Units

Stage 3

24 hr Medical Centre, pharmacy and casualty with 10 overnight beds

Stage 4

Stand alone obstetric unit with 20 overnight single bed suites

Stage 5

Illawarra International Hospital with 310 overnight beds

Stage 6

Nurse, resident medical officer and medical student accommodation – integral with the tertiary referral hospital education programme

Stage 7

Illawarra International Aged and Disability Centre - with 280 beds, mainly high care. Senior's independent living units.

Stage 8

Educational Facility- with associated accommodation for patient's relatives and outpatient accommodation while undergoing extended therapies.

BACKGROUND

Hardes and Associates were commissioned by La Vie Developments (Dr Brett Gooley) to undertake a review of unmet private hospital demand in the Illawarra area and the potential to establish a major private tertiary hospital as part of an overall health precinct.

The review was undertaken in 3 stages. Stage 1 reviewed the 'unmet' private hospital demand in the primary catchment – defined as the LGA's of Wollongong, Shellharbour, Shoalhaven and Kiama. Stage 2 modelled future private hospital growth in the catchment under the impacts of population growth, ageing and clinical trends. In Stage 3 we build upon the results from Stages 1 and 2 to identify the potential for the development of a major tertiary private hospital in response to these increasing demand pressures.

The proposed development has received strong support from the Faculty of Health and Behavioural Sciences, University of Wollongong.

The development will be dependent upon the ability of the operator to attract clinical and other staff to an area where staff recruitment in both public and private sector has been a problem. The limited development of the private sector in the precinct has exacerbated this problem – and contributed to its creation. By establishing a major tertiary referral hospital, with the associated supporting infrastructure, the developer is seeking to provide a working environment that is attractive to clinicians. If this strategy is successful it will not only greatly enhance the private sector but will also expand the pool of clinicians available to the public sector. It would also significantly enhance the limited clinical training opportunities across the area.

METHODOLOGY

The methodology for estimating potential private hospital demand and projecting future demand has been identified in earlier stages of this report. The modelling is based upon the approach, developed by Hardes and Associates, and used by public health authorities throughout Australia. Thus we have identified the potential private hospital demand and projected demand in the primary catchment

The challenge in this stage of the review is to identify how much of the potential private hospital demand could be captured by a major new development. There is no simple way of making this estimation – but in many respects it is at the heart of the demand modelling.

It is also important to note that the market share achieved is, in many respects, self-fulfilling i.e. the size of the development itself will determine the market share. To estimate likely market shares the most important consideration is the proposed role of the hospital.

The proposed development would see the creation of a major tertiary private hospital with catchment extending well beyond the primary catchment. The proposed hospital would be supported by 24 hour radiology, pathology, pharmacy, medical centre and casualty as well as a 280 bed aged care facility (subject to Commonwealth approval). The hospital would be an important component of the clinical training programmes offered by the School of Health and Behavioural Sciences, University of Wollongong.

We also need to consider the role of existing private hospital providers and their potential response.

The catchment – and indeed the surrounding areas – is dominated by hospitals operated by Ramsay Healthcare. Within the catchment services are provided from Figtree (101 beds), Nowra (91 beds), Lawrence Hargrave (42 beds) and the independently owned Shellharbour (55 beds). There is also a small day surgery centre in Wollongong. The surrounding area is serviced by Ramsay hospitals in Southern Highlands, Macarthur (Campbelltown), St George (Kogarah), Kareena (Sutherland) and by non-Ramsay hospitals at Calvary Health (Hurstville) and President (Kirrawee). The area around Sutherland is one of the most heavily serviced private hospital pockets of New South Wales.

There has been little pro-active development of private hospital services in the primary catchment. This has resulted in a limited supply of clinicians and contributed to shortages in both the public and private sector. In turn, the shortage of clinicians has been a limiting factor in expansion of private

hospitals in the area. One of the aims of the proposed development is to break this circular pattern and use the development as a tool to attract clinicians to the area. Our projection of the potential workload at the proposed hospital assumes that the hospital is able to attract sufficient clinical (general practitioner, specialist, nursing and other paramedical staff) to operate the facility. This is an important assumption that needs to be tested. The support of the Medical Faculty will be a critical component.

Based upon the historic pattern of development across the area we have assumed that the existing private providers will not respond aggressively – mainly because of an inability to do so. Again this is an important assumption – one that is especially relevant in relation to Figtree Private Hospital - the main private provider at the present time.

The current proposal allows for a staged development with the establishment of an international standard private hospital part of a much larger overall development. The proposed staging includes –

Stage 1

Illawarra International Specialist and Surgicentre including 10 overnight beds and two intensive care beds

Stage 2

Pathology and Radiology Units

Stage 3

24 hr Medical Centre, pharmacy and casualty with 10 overnight beds

Stage 4

Stand alone obstetric unit with 20 overnight single bed suites

Stage 5

Illawarra International Hospital with 310 overnight beds

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In this report we make market share assumptions consistent with the role proposed for the development. Market share assumptions are applied to the primary catchment and these estimates are inflated to take account of additional work that can be anticipated from outside the primary catchment.

Assumptions about market shares need to be carefully considered. The projections will only be as valid as the market share assumptions underpinning them. Our indicative market share assumptions are –

1. Same day admissions

These services are provided by existing private hospitals as well as a local same day clinic in Wollongong. It will be difficult to capture same day work from Wollongong – and also difficult to defend as new competitors are attracted to the market. It is assumed that the proposed hospital will capture the following same day market shares –

Wollongong 30%
Shellharbour.....60%
Kiama.....80%
Shoalhaven 45%

The hospital will capture 90% of Renal Dialysis as it is currently not provided in the local private sector.

2. Overnight admissions

The proposed hospital will be the major provider of tertiary private hospital services in the Region. This will not only result in capture of a high proportion of tertiary work currently being referred elsewhere but will also attract high proportions of non-tertiary work. There is a tendency for clinicians to preferentially refer to hospitals where there are high levels of support. For the modelling it has been assumed that the proposed hospital will capture the following overnight market shares –

Wollongong 30%
Shellharbour.....70%
Kiama.....85%
Shoalhaven 50%

For Cardiothoracic Surgery, Interventional Cardiology and Neurosurgery it is assumed that the hospital will capture 30% of the Wollongong market but 80% of the Shellharbour, Kiama and Shoalhaven market.

RESULTS

The first step in estimating the potential demand for the new development is to quantify the total potential private hospital demand in the primary catchment at various times into the future. This has already been a component of the analyses in Stages 1 and 2.

For these purposes we have assumed that the existence of a first class private hospital facility will result in above average rates of private hospital utilisation. This is a reasonable assumption clearly supported by evidence across the state and throughout Australia. We have estimated that admission rates will be at least 10% higher than average. Where the current and projected rates are already more than 10% above the average the existing rate is applied. It is worth noting for comparison purposes that private hospital utilisation in Newcastle/Lake Macquarie – a comparable area in terms of industrial base and socioeconomic status – use private hospitals at a rate 10% higher than the State average.

The following tables show the total projected private hospital demand profile for residents of each LGA in the primary catchment according to specialty and stay type – under the scenario outlined above.

PROFILE OF PROJECTED PRIVATE HOSPITAL DEMAND ACCORDING TO PLACE OF RESIDENCE – with rates 10% above state average

WOLLONGONG

Same Day Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	75	83	95	75	83	95
02 Interventional Cardiology	651	754	886	651	754	886
03 Cardiothoracic Surgery	15	15	15	15	15	15
04 Respiratory Medicine	18	19	20	18	19	20
05 Gastroenterology	75	93	113	75	93	113
06 GIT Endodoscopy	4,127	4,143	4,150	4,127	4,143	4,150
07 Neurology	50	58	67	50	58	67
08 Neurosurgery	24	25	26	24	25	26
09 Endocrinology	48	59	73	48	59	73
10 Renal Medicine	39	48	60	39	48	60
11 Renal Dialysis	1,075	1,432	1,882	1,075	1,432	1,882
12 Haematology	292	372	468	292	372	468
13 ENT	427	441	459	427	441	459
14 Ophthamology	2,175	2,657	3,284	2,175	2,657	3,284
15 Medical Oncology	171	213	264	171	213	264
16 Chemotherapy and Radiotherapy	1,630	1,561	1,497	1,630	1,561	1,497
17 Rheumatology	56	67	79	56	67	79
18 Dermatology	54	46	37	54	46	37
19 Head and Neck Surgery	80	95	111	80	95	111
20 Dentistry	1,273	1,420	1,571	1,273	1,420	1,571
21 Upper GIT Surgery	20	24	28	20	24	28
22 Colorectal Surgery	285	318	353	285	318	353
23 Orthopaedics	1,174	1,251	1,329	1,174	1,251	1,329
24 Urology	1,066	1,103	1,154	1,066	1,103	1,154
25 Vascular Surgery	90	108	132	90	108	132
26 General Medicine	700	837	988	700	837	988
27 General Surgery	348	407	472	348	407	472
28 Breast Surgery	116	124	132	116	124	132
29 Plastic and Reconstructive Surgery	923	1,048	1,193	923	1,048	1,193
30 Gynaecology	1,358	1,402	1,434	1,358	1,402	1,434
31 Obstetrics	31	35	38	31	35	38
32 Babies	17	15	14	17	15	14
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	153	177	201	153	177	201
36 Burns	3	3	3	3	3	3
37 Psychiatry	780	936	1,097	780	936	1,097
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	128	149	171	128	149	171
40 Non-acute	2,142	2,631	3,239	2,142	2,631	3,239
Grand Total	21,688	24,168	27,135	21,688	24,168	27,135

Overnight Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	206	230	255	1,627	1,775	1,936
02 Interventional Cardiology	419	477	553	990	1,102	1,271
03 Cardiothoracic Surgery	124	123	123	1,051	1,087	1,107
04 Respiratory Medicine	519	561	604	1,707	1,655	1,649
05 Gastroenterology	136	160	189	662	762	885
06 GIT Endodoscopy	127	123	119	395	380	364
07 Neurology	140	153	166	1,546	1,652	1,767
08 Neurosurgery	227	250	278	1,747	1,777	1,827
09 Endocrinology	66	77	89	473	551	636
10 Renal Medicine	45	51	57	129	145	163
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	110	119	129	675	724	791
13 ENT	549	528	504	571	541	513
14 Ophthamology	146	140	132	157	153	144
15 Medical Oncology	107	106	104	1,238	1,199	1,151
16 Chemotherapy and Radiotherapy	1	1	1	1	1	1
17 Rheumatology	34	34	35	166	157	148
18 Dermatology	13	12	12	182	178	173
19 Head and Neck Surgery	104	119	135	197	204	212
20 Dentistry	52	43	34	56	50	42
21 Upper GIT Surgery	356	365	372	983	929	879
22 Colorectal Surgery	184	188	193	1,379	1,325	1,301
23 Orthopaedics	1,297	1,386	1,496	6,098	6,371	6,795
24 Urology	447	474	501	1,554	1,525	1,504
25 Vascular Surgery	205	197	188	1,124	1,073	1,036
26 General Medicine	328	367	414	1,124	1,264	1,431
27 General Surgery	531	551	574	1,581	1,769	1,984
28 Breast Surgery	170	181	190	485	437	397
29 Plastic and Reconstructive Surgery	188	188	185	645	612	581
30 Gynaecology	385	339	293	1,335	1,017	776
31 Obstetrics	847	868	883	4,453	4,170	3,914
32 Babies	795	822	862	4,317	4,207	4,181
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	9	10	11	136	154	177
35 Drug & Alcohol	68	78	88	1,047	1,271	1,505
36 Burns	1	1	1	1	1	1
37 Psychiatry	249	292	335	4,967	6,177	7,424
38 Acute Rehabilitation	1	1	1	1	1	1
39 Ungroupable	33	30	28	185	161	144
40 Non-acute	611	730	871	10,008	11,464	13,190
Grand Total	9,831	10,375	11,003	54,992	58,024	62,001

PROFILE OF PROJECTED PRIVATE HOSPITAL DEMAND ACCORDING TO PLACE OF RESIDENCE – with rates 10% above state average

SHOALHAVEN

Same Day Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	46	53	62	46	53	62
02 Interventional Cardiology	467	547	648	467	547	648
03 Cardiothoracic Surgery	9	8	8	9	8	8
04 Respiratory Medicine	11	12	13	11	12	13
05 Gastroenterology	41	53	66	41	53	66
06 GIT Endodoscopy	2,277	2,393	2,522	2,277	2,393	2,522
07 Neurology	29	35	42	29	35	42
08 Neurosurgery	14	15	17	14	15	17
09 Endocrinology	30	38	49	30	38	49
10 Renal Medicine	24	32	41	24	32	41
11 Renal Dialysis	693	968	1,325	693	968	1,325
12 Haematology	181	240	313	181	240	313
13 ENT	181	195	210	181	195	210
14 Ophthamology	1,409	1,801	2,317	1,409	1,801	2,317
15 Medical Oncology	109	142	182	109	142	182
16 Chemotherapy and Radiotherapy	567	574	587	567	574	587
17 Rheumatology	32	39	48	32	39	48
18 Dermatology	28	25	20	28	25	20
19 Head and Neck Surgery	43	52	62	43	52	62
20 Dentistry	375	439	507	375	439	507
21 Upper GIT Surgery	10	13	15	10	13	15
22 Colorectal Surgery	160	184	210	160	184	210
23 Orthopaedics	656	729	803	656	729	803
24 Urology	433	490	558	433	490	558
25 Vascular Surgery	55	70	90	55	70	90
26 General Medicine	264	339	423	264	339	423
27 General Surgery	193	233	279	193	233	279
28 Breast Surgery	59	64	68	59	64	68
29 Plastic and Reconstructive Surgery	551	655	776	551	655	776
30 Gynaecology	589	604	614	589	604	614
31 Obstetrics	12	13	15	12	13	15
32 Babies	9	8	7	9	8	7
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	80	94	108	80	94	108
36 Burns	0	0	0	0	0	0
37 Psychiatry	411	507	604	411	507	604
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	77	94	111	77	94	111
40 Non-acute	940	1,242	1,624	940	1,242	1,624
Grand Total	11,066	12,999	15,343	11,066	12,999	15,343

Overnight Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	131	152	174	729	833	922
02 Interventional Cardiology	270	321	386	688	931	1,175
03 Cardiothoracic Surgery	77	79	81	759	815	876
04 Respiratory Medicine	307	342	377	1,687	1,409	1,345
05 Gastroenterology	81	100	122	394	505	643
06 GIT Endodoscopy	81	82	82	261	263	268
07 Neurology	85	96	109	403	465	503
08 Neurosurgery	135	156	181	997	1,061	1,187
09 Endocrinology	42	50	61	359	404	463
10 Renal Medicine	29	34	40	160	237	286
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	70	79	88	325	390	460
13 ENT	192	188	185	213	216	213
14 Ophthamology	94	95	93	107	105	102
15 Medical Oncology	68	70	71	595	611	619
16 Chemotherapy and Radiotherapy	1	0	0	1	0	0
17 Rheumatology	20	22	23	137	138	142
18 Dermatology	8	8	8	11	12	13
19 Head and Neck Surgery	60	71	82	145	157	168
20 Dentistry	20	16	13	20	18	14
21 Upper GIT Surgery	159	169	176	429	407	392
22 Colorectal Surgery	104	110	115	786	791	804
23 Orthopaedics	768	858	963	4,870	5,487	6,256
24 Urology	281	310	337	998	977	972
25 Vascular Surgery	121	122	121	817	795	774
26 General Medicine	199	233	274	1,164	1,419	1,640
27 General Surgery	311	336	363	1,299	1,417	1,630
28 Breast Surgery	87	93	98	254	223	198
29 Plastic and Reconstructive Surgery	111	114	116	460	448	430
30 Gynaecology	190	176	158	768	621	502
31 Obstetrics	317	324	332	1,408	1,316	1,248
32 Babies	359	373	393	1,640	1,612	1,616
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	6	7	7	254	306	370
35 Drug & Alcohol	34	40	46	473	585	703
36 Burns	1	1	1	1	1	1
37 Psychiatry	130	155	181	2,409	3,003	3,597
38 Acute Rehabilitation	1	1	1	1	1	1
39 Ungroupable	18	18	18	43	41	37
40 Non-acute	374	467	581	4,797	5,637	6,667
Grand Total	5,341	5,868	6,456	30,858	33,656	37,235

PROFILE OF PROJECTED PRIVATE HOSPITAL DEMAND ACCORDING TO PLACE OF RESIDENCE – with rates 10% above state average

SHELLHARBOUR

Same Day Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	24	27	31	24	27	31
02 Interventional Cardiology	176	212	253	176	212	253
03 Cardiothoracic Surgery	9	8	8	9	8	8
04 Respiratory Medicine	6	6	7	6	6	7
05 Gastroenterology	25	31	37	25	31	37
06 GIT Endodoscopy	1,252	1,269	1,278	1,252	1,269	1,278
07 Neurology	17	19	22	17	19	22
08 Neurosurgery	8	8	9	8	8	9
09 Endocrinology	16	20	24	16	20	24
10 Renal Medicine	13	16	20	13	16	20
11 Renal Dialysis	343	473	629	343	473	629
12 Haematology	106	136	169	106	136	169
13 ENT	130	131	133	130	131	133
14 Ophthamology	685	871	1,094	685	871	1,094
15 Medical Oncology	56	71	88	56	71	88
16 Chemotherapy and Radiotherapy	422	415	379	422	415	379
17 Rheumatology	19	22	26	19	22	26
18 Dermatology	19	16	12	19	16	12
19 Head and Neck Surgery	28	32	36	28	32	36
20 Dentistry	357	390	418	357	390	418
21 Upper GIT Surgery	7	8	9	7	8	9
22 Colorectal Surgery	96	106	115	96	106	115
23 Orthopaedics	397	418	435	397	418	435
24 Urology	307	309	317	307	309	317
25 Vascular Surgery	29	36	44	29	36	44
26 General Medicine	226	266	307	226	266	307
27 General Surgery	120	137	154	120	137	154
28 Breast Surgery	39	41	42	39	41	42
29 Plastic and Reconstructive Surgery	300	343	390	300	343	390
30 Gynaecology	471	464	449	471	464	449
31 Obstetrics	11	11	12	11	11	12
32 Babies	7	6	5	7	6	5
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	52	59	64	52	59	64
36 Burns	0	0	0	0	0	0
37 Psychiatry	265	310	352	265	310	352
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	43	50	56	43	50	56
40 Non-acute	471	613	779	471	613	779
Grand Total	6,550	7,349	8,202	6,550	7,349	8,202

Overnight Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	63	73	83	257	283	314
02 Interventional Cardiology	133	156	183	460	532	635
03 Cardiothoracic Surgery	41	42	41	363	394	413
04 Respiratory Medicine	171	185	198	577	547	547
05 Gastroenterology	44	52	62	393	495	609
06 GIT Endodoscopy	39	40	39	157	151	148
07 Neurology	45	50	54	373	432	482
08 Neurosurgery	75	83	92	606	629	653
09 Endocrinology	25	30	34	204	231	263
10 Renal Medicine	14	16	19	227	260	310
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	34	38	42	102	177	204
13 ENT	203	186	172	212	194	179
14 Ophthamology	45	45	43	51	61	61
15 Medical Oncology	34	34	34	447	437	424
16 Chemotherapy and Radiotherapy	1	1	1	2	1	1
17 Rheumatology	11	11	11	111	80	86
18 Dermatology	4	4	4	10	12	11
19 Head and Neck Surgery	35	40	44	64	63	65
20 Dentistry	34	25	17	34	30	21
21 Upper GIT Surgery	113	113	111	295	276	254
22 Colorectal Surgery	58	59	60	412	416	411
23 Orthopaedics	425	457	491	1,589	1,682	1,816
24 Urology	144	156	165	334	350	343
25 Vascular Surgery	61	61	59	252	237	217
26 General Medicine	104	119	135	701	809	942
27 General Surgery	174	181	187	448	471	511
28 Breast Surgery	54	57	58	141	125	113
29 Plastic and Reconstructive Surgery	60	63	64	159	195	197
30 Gynaecology	117	104	88	416	323	244
31 Obstetrics	283	277	269	1,470	1,320	1,187
32 Babies	288	281	277	1,502	1,388	1,300
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	6	7	7	112	131	148
35 Drug & Alcohol	23	26	28	476	573	663
36 Burns	1	1	1	2	14	13
37 Psychiatry	85	97	108	1,879	2,259	2,605
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	10	10	9	22	22	21
40 Non-acute	178	223	273	2,830	3,424	4,091
Grand Total	3,237	3,398	3,560	17,689	19,025	20,500

PROFILE OF PROJECTED PRIVATE HOSPITAL DEMAND ACCORDING TO PLACE OF RESIDENCE – with rates 10% above state average

KIAMA

Same Day Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	9	10	12	9	10	12
02 Interventional Cardiology	87	102	123	87	102	123
03 Cardiothoracic Surgery	3	3	3	3	3	3
04 Respiratory Medicine	2	2	2	2	2	2
05 Gastroenterology	9	11	13	9	11	13
06 GIT Endodoscopy	712	716	705	712	716	705
07 Neurology	6	7	8	6	7	8
08 Neurosurgery	3	3	3	3	3	3
09 Endocrinology	6	7	9	6	7	9
10 Renal Medicine	5	6	8	5	6	8
11 Renal Dialysis	131	179	242	131	179	242
12 Haematology	38	52	70	38	52	70
13 ENT	59	61	64	59	61	64
14 Ophthamology	266	332	423	266	332	423
15 Medical Oncology	21	26	33	21	26	33
16 Chemotherapy and Radiotherapy	233	203	186	233	203	186
17 Rheumatology	6	8	9	6	8	9
18 Dermatology	6	5	4	6	5	4
19 Head and Neck Surgery	9	11	12	9	11	12
20 Dentistry	135	148	162	135	148	162
21 Upper GIT Surgery	5	5	6	5	5	6
22 Colorectal Surgery	33	37	41	33	37	41
23 Orthopaedics	147	156	167	147	156	167
24 Urology	114	121	130	114	121	130
25 Vascular Surgery	13	14	17	13	14	17
26 General Medicine	147	163	181	147	163	181
27 General Surgery	40	46	54	40	46	54
28 Breast Surgery	13	14	15	13	14	15
29 Plastic and Reconstructive Surgery	113	131	153	113	131	153
30 Gynaecology	138	138	137	138	138	137
31 Obstetrics	3	3	3	3	3	3
32 Babies	2	2	1	2	2	1
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	24	28	32	24	28	32
36 Burns	0	0	0	0	0	0
37 Psychiatry	88	105	121	88	105	121
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	21	24	28	21	24	28
40 Non-acute	180	232	299	180	232	299
Grand Total	2,824	3,114	3,476	2,824	3,114	3,476

Overnight Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	26	29	32	169	164	167
02 Interventional Cardiology	51	60	71	149	187	222
03 Cardiothoracic Surgery	16	16	16	184	185	198
04 Respiratory Medicine	62	67	72	187	179	184
05 Gastroenterology	16	19	23	114	156	182
06 GIT Endodoscopy	25	26	27	85	100	109
07 Neurology	17	19	20	202	202	223
08 Neurosurgery	27	30	34	227	213	228
09 Endocrinology	15	17	19	69	76	82
10 Renal Medicine	6	6	7	6	6	7
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	14	15	16	42	50	57
13 ENT	73	70	68	79	81	79
14 Ophthamology	25	23	22	25	27	25
15 Medical Oncology	13	13	13	114	107	110
16 Chemotherapy and Radiotherapy	0	0	0	2	2	2
17 Rheumatology	6	6	6	29	36	32
18 Dermatology	2	2	2	2	2	2
19 Head and Neck Surgery	12	14	16	31	32	33
20 Dentistry	14	11	8	14	13	10
21 Upper GIT Surgery	34	35	37	112	114	114
22 Colorectal Surgery	34	35	36	256	251	245
23 Orthopaedics	175	191	212	833	935	1,071
24 Urology	55	59	64	144	167	173
25 Vascular Surgery	39	38	40	276	211	222
26 General Medicine	44	49	54	179	196	217
27 General Surgery	69	73	78	290	309	344
28 Breast Surgery	26	27	28	84	73	65
29 Plastic and Reconstructive Surgery	23	23	23	86	119	119
30 Gynaecology	60	55	45	241	189	134
31 Obstetrics	78	78	78	384	350	324
32 Babies	75	76	78	387	369	362
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	3	3	4	79	117	137
35 Drug & Alcohol	8	8	9	113	132	150
36 Burns	0	0	0	0	0	0
37 Psychiatry	28	32	36	431	592	706
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	8	8	8	71	56	50
40 Non-acute	78	98	124	1,474	1,769	2,110
Grand Total	1,255	1,331	1,427	7,167	7,766	8,495

PROFILE OF PROJECTED PRIVATE HOSPITAL DEMAND ACCORDING TO PLACE OF RESIDENCE – with rates 10% above state average

TOTAL PRIMARY CATCHMENT

Same Day Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	154	173	201	154	173	201
02 Interventional Cardiology	904	1,112	1,373	904	1,112	1,373
03 Cardiothoracic Surgery	29	27	25	29	27	25
04 Respiratory Medicine	38	40	43	38	40	43
05 Gastroenterology	150	187	228	150	187	228
06 GIT Endodoscopy	7,770	7,940	8,150	7,770	7,940	8,150
07 Neurology	101	119	139	101	119	139
08 Neurosurgery	49	51	54	49	51	54
09 Endocrinology	99	125	155	99	125	155
10 Renal Medicine	80	101	127	80	101	127
11 Renal Dialysis	2,242	3,052	4,077	2,242	3,052	4,077
12 Haematology	602	779	993	602	779	993
13 ENT	701	739	784	701	739	784
14 Ophthamology	4,535	5,661	7,119	4,535	5,661	7,119
15 Medical Oncology	357	452	566	357	452	566
16 Chemotherapy and Radiotherapy	1,884	1,858	1,851	1,884	1,858	1,851
17 Rheumatology	113	136	162	113	136	162
18 Dermatology	107	91	74	107	91	74
19 Head and Neck Surgery	159	190	221	159	190	221
20 Dentistry	1,606	1,853	2,103	1,606	1,853	2,103
21 Upper GIT Surgery	39	47	55	39	47	55
22 Colorectal Surgery	573	644	719	573	644	719
23 Orthopaedics	2,363	2,542	2,722	2,363	2,542	2,722
24 Urology	1,492	1,634	1,805	1,492	1,634	1,805
25 Vascular Surgery	184	227	282	184	227	282
26 General Medicine	910	1,139	1,392	910	1,139	1,392
27 General Surgery	701	823	960	701	823	960
28 Breast Surgery	225	241	255	225	241	255
29 Plastic and Reconstructive Surgery	1,884	2,171	2,505	1,884	2,171	2,505
30 Gynaecology	2,557	2,608	2,634	2,557	2,608	2,634
31 Obstetrics	57	63	69	57	63	69
32 Babies	35	30	27	35	30	27
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	303	349	395	303	349	395
36 Burns	1	1	1	1	1	1
37 Psychiatry	1,545	1,858	2,174	1,545	1,858	2,174
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	262	310	360	262	310	360
40 Non-acute	3,069	3,958	5,058	3,069	3,958	5,058
Grand Total	37,877	43,332	49,857	37,877	43,332	49,857

Overnight Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	426	484	544	2,841	3,091	3,370
02 Interventional Cardiology	874	1,015	1,193	2,265	2,717	3,255
03 Cardiothoracic Surgery	258	258	260	2,298	2,426	2,533
04 Respiratory Medicine	1,058	1,156	1,250	3,826	3,627	3,609
05 Gastroenterology	278	331	395	1,590	1,951	2,345
06 GIT Endodoscopy	263	260	254	876	874	866
07 Neurology	287	317	350	2,776	2,991	3,243
08 Neurosurgery	464	519	585	3,590	3,695	3,896
09 Endocrinology	137	162	190	981	1,147	1,331
10 Renal Medicine	93	107	122	452	612	747
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	227	250	275	1,177	1,347	1,513
13 ENT	751	727	701	791	767	736
14 Ophthamology	303	296	285	330	336	321
15 Medical Oncology	222	223	222	2,360	2,341	2,304
16 Chemotherapy and Radiotherapy	2	2	1	6	3	3
17 Rheumatology	69	71	74	406	385	383
18 Dermatology	26	26	26	196	198	200
19 Head and Neck Surgery	211	243	277	418	439	461
20 Dentistry	50	44	38	52	51	46
21 Upper GIT Surgery	576	600	619	1,584	1,527	1,465
22 Colorectal Surgery	359	369	380	2,677	2,622	2,588
23 Orthopaedics	2,644	2,867	3,131	13,182	14,273	15,737
24 Urology	927	998	1,066	3,004	3,004	2,978
25 Vascular Surgery	401	396	385	2,320	2,198	2,143
26 General Medicine	670	763	874	3,093	3,633	4,189
27 General Surgery	1,078	1,133	1,193	3,459	3,828	4,318
28 Breast Surgery	321	341	355	916	816	738
29 Plastic and Reconstructive Surgery	380	385	382	1,343	1,363	1,312
30 Gynaecology	694	628	550	2,498	1,963	1,524
31 Obstetrics	1,489	1,518	1,545	7,765	7,236	6,803
32 Babies	1,431	1,462	1,519	7,678	7,399	7,293
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	19	21	23	405	504	600
35 Drug & Alcohol	134	153	171	2,092	2,556	3,019
36 Burns	3	3	3	4	24	24
37 Psychiatry	491	576	660	9,706	12,013	14,296
38 Acute Rehabilitation	2	2	2	2	2	2
39 Ungroupable	62	61	59	328	290	262
40 Non-acute	1,208	1,477	1,797	19,300	22,533	26,395
Grand Total	18,888	20,242	21,756	108,589	116,780	126,848

The previous tables confirm the results already reported in Stages 1 and 2. There is substantial potential for expanded private hospital services in the Illawarra and associated primary catchment. Clearly not all projected private hospital work will be captured by the proposed hospital. In order to estimate the potential demand for the proposed development we need to make assumptions about the likely market share. Assumptions about market shares have been outlined in the Methodology section.

The following tables show the total projected private hospital demand profile for residents of each LGA in the primary catchment according to specialty and stay type – under the market share assumptions described.

PROFILE OF PROJECTED PRIVATE HOSPITAL WORKLOAD ACCORDING TO PLACE OF RESIDENCE – with assumed market share

WOLLONGONG

Same Day Admissions (30%)

	Projected Admissions			Projected Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	22	25	29	22	25	29
02 Interventional Cardiology	195	226	266	195	226	266
03 Cardiothoracic Surgery	5	4	4	5	4	4
04 Respiratory Medicine	6	6	6	6	6	6
05 Gastroenterology	22	28	34	22	28	34
06 GIT Endodoscopy	1,238	1,243	1,245	1,238	1,243	1,245
07 Neurology	15	17	20	15	17	20
08 Neurosurgery	7	7	8	7	7	8
09 Endocrinology	14	18	22	14	18	22
10 Renal Medicine	12	14	18	12	14	18
11 Renal Dialysis	968	1,289	1,694	968	1,289	1,694
12 Haematology	88	112	140	88	112	140
13 ENT	128	132	138	128	132	138
14 Ophthamology	653	797	985	653	797	985
15 Medical Oncology	51	64	79	51	64	79
16 Chemotherapy and Radiotherapy	489	468	449	489	468	449
17 Rheumatology	17	20	24	17	20	24
18 Dermatology	16	14	11	16	14	11
19 Head and Neck Surgery	24	29	33	24	29	33
20 Dentistry	382	426	471	382	426	471
21 Upper GIT Surgery	6	7	8	6	7	8
22 Colorectal Surgery	85	95	106	85	95	106
23 Orthopaedics	352	375	399	352	375	399
24 Urology	320	331	346	320	331	346
25 Vascular Surgery	27	32	40	27	32	40
26 General Medicine	210	251	296	210	251	296
27 General Surgery	105	122	142	105	122	142
28 Breast Surgery	35	37	40	35	37	40
29 Plastic and Reconstructive Surgery	277	314	358	277	314	358
30 Gynaecology	408	421	430	408	421	430
31 Obstetrics	9	10	12	9	10	12
32 Babies	5	5	4	5	5	4
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	46	53	60	46	53	60
36 Burns	1	1	1	1	1	1
37 Psychiatry	234	281	329	234	281	329
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	38	45	51	38	45	51
40 Non-acute	643	789	972	643	789	972
Grand Total	7,151	8,110	9,270	7,151	8,110	9,270

Overnight Admissions (30%)

	Projected Admissions			Projected Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	62	69	76	488	533	581
02 Interventional Cardiology	126	143	166	297	331	381
03 Cardiothoracic Surgery	37	37	37	315	326	332
04 Respiratory Medicine	156	168	181	512	496	495
05 Gastroenterology	41	48	57	199	229	266
06 GIT Endodoscopy	38	37	36	118	114	109
07 Neurology	42	46	50	464	496	530
08 Neurosurgery	68	75	83	524	533	548
09 Endocrinology	20	23	27	142	165	191
10 Renal Medicine	14	15	17	39	44	49
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	33	36	39	203	217	237
13 ENT	165	158	151	171	162	154
14 Ophthamology	44	42	40	47	46	43
15 Medical Oncology	32	32	31	371	360	345
16 Chemotherapy and Radiotherapy	0	0	0	0	0	0
17 Rheumatology	10	10	10	50	47	45
18 Dermatology	4	4	4	54	53	52
19 Head and Neck Surgery	31	36	40	59	61	64
20 Dentistry	16	13	10	17	15	12
21 Upper GIT Surgery	107	109	112	295	279	264
22 Colorectal Surgery	55	56	58	414	398	390
23 Orthopaedics	389	416	449	1,829	1,911	2,039
24 Urology	134	142	150	466	458	451
25 Vascular Surgery	62	59	57	337	322	311
26 General Medicine	98	110	124	337	379	429
27 General Surgery	159	165	172	474	531	595
28 Breast Surgery	51	54	57	146	131	119
29 Plastic and Reconstructive Surgery	56	56	55	193	184	174
30 Gynaecology	115	102	88	400	305	233
31 Obstetrics	254	261	265	1,336	1,251	1,174
32 Babies	238	247	259	1,295	1,262	1,254
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	3	3	3	41	46	53
35 Drug & Alcohol	20	23	26	314	381	451
36 Burns	0	0	0	0	0	0
37 Psychiatry	75	88	101	1,490	1,853	2,227
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	10	9	8	55	48	43
40 Non-acute	183	219	261	3,002	3,439	3,957
Grand Total	2,949	3,113	3,301	16,498	17,407	18,601

PROFILE OF PROJECTED PRIVATE HOSPITAL WORKLOAD ACCORDING TO PLACE OF RESIDENCE – with assumed market share

SHOALHAVEN

Same Day Admissions (45%)

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	21	24	28	21	24	28
02 Interventional Cardiology	210	246	292	210	246	292
03 Cardiothoracic Surgery	4	4	4	4	4	4
04 Respiratory Medicine	5	6	6	5	6	6
05 Gastroenterology	19	24	30	19	24	30
06 GIT Endodoscopy	1,025	1,077	1,135	1,025	1,077	1,135
07 Neurology	13	16	19	13	16	19
08 Neurosurgery	6	7	7	6	7	7
09 Endocrinology	13	17	22	13	17	22
10 Renal Medicine	11	14	18	11	14	18
11 Renal Dialysis	624	871	1,192	624	871	1,192
12 Haematology	81	108	141	81	108	141
13 ENT	81	88	95	81	88	95
14 Ophthamology	634	810	1,043	634	810	1,043
15 Medical Oncology	49	64	82	49	64	82
16 Chemotherapy and Radiotherapy	255	258	264	255	258	264
17 Rheumatology	14	18	21	14	18	21
18 Dermatology	13	11	9	13	11	9
19 Head and Neck Surgery	19	23	28	19	23	28
20 Dentistry	169	198	228	169	198	228
21 Upper GIT Surgery	5	6	7	5	6	7
22 Colorectal Surgery	72	83	95	72	83	95
23 Orthopaedics	295	328	361	295	328	361
24 Urology	195	220	251	195	220	251
25 Vascular Surgery	25	32	40	25	32	40
26 General Medicine	119	153	191	119	153	191
27 General Surgery	87	105	126	87	105	126
28 Breast Surgery	26	29	31	26	29	31
29 Plastic and Reconstructive Surgery	248	295	349	248	295	349
30 Gynaecology	265	272	276	265	272	276
31 Obstetrics	5	6	7	5	6	7
32 Babies	4	3	3	4	3	3
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	36	42	49	36	42	49
36 Burns	0	0	0	0	0	0
37 Psychiatry	185	228	272	185	228	272
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	35	42	50	35	42	50
40 Non-acute	423	559	731	423	559	731
Grand Total	5,292	6,285	7,501	5,292	6,285	7,501

Overnight Admissions (50%)

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	66	76	87	364	417	461
02 Interventional Cardiology	216	257	309	551	745	940
03 Cardiothoracic Surgery	61	63	65	607	652	701
04 Respiratory Medicine	153	171	188	843	705	672
05 Gastroenterology	41	50	61	197	252	321
06 GIT Endodoscopy	40	41	41	130	131	134
07 Neurology	42	48	55	201	232	252
08 Neurosurgery	108	125	145	797	849	950
09 Endocrinology	21	25	30	179	202	232
10 Renal Medicine	14	17	20	80	118	143
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	35	39	44	162	195	230
13 ENT	96	94	92	107	108	106
14 Ophthamology	47	47	46	53	52	51
15 Medical Oncology	34	35	36	297	305	310
16 Chemotherapy and Radiotherapy	0	0	0	0	0	0
17 Rheumatology	10	11	12	69	69	71
18 Dermatology	4	4	4	6	6	6
19 Head and Neck Surgery	30	35	41	73	78	84
20 Dentistry	10	8	6	10	9	7
21 Upper GIT Surgery	80	84	88	214	204	196
22 Colorectal Surgery	52	55	58	393	396	402
23 Orthopaedics	384	429	481	2,435	2,744	3,128
24 Urology	141	155	169	499	488	486
25 Vascular Surgery	61	61	61	408	398	387
26 General Medicine	99	116	137	582	710	820
27 General Surgery	155	168	182	649	709	815
28 Breast Surgery	44	47	49	127	111	99
29 Plastic and Reconstructive Surge	55	57	58	230	224	215
30 Gynaecology	95	88	79	384	311	251
31 Obstetrics	158	162	166	704	658	624
32 Babies	180	187	196	820	806	808
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	3	3	4	127	153	185
35 Drug & Alcohol	17	20	23	236	292	352
36 Burns	0	0	0	0	0	0
37 Psychiatry	65	78	90	1,205	1,501	1,799
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	9	9	9	21	21	18
40 Non-acute	187	234	290	2,398	2,818	3,333
Grand Total	2,815	3,101	3,423	16,162	17,671	19,589

PROFILE OF PROJECTED PRIVATE HOSPITAL WORKLOAD ACCORDING TO PLACE OF RESIDENCE – with assumed market share

SHELLHARBOUR

Same Day Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	15	16	19	15	16	19
02 Interventional Cardiology	105	127	152	105	127	152
03 Cardiothoracic Surgery	5	5	5	5	5	5
04 Respiratory Medicine	4	4	4	4	4	4
05 Gastroenterology	15	19	22	15	19	22
06 GIT Endodoscopy	751	761	767	751	761	767
07 Neurology	10	12	13	10	12	13
08 Neurosurgery	5	5	5	5	5	5
09 Endocrinology	9	12	15	9	12	15
10 Renal Medicine	8	9	12	8	9	12
11 Renal Dialysis	309	426	566	309	426	566
12 Haematology	63	81	102	63	81	102
13 ENT	78	79	80	78	79	80
14 Ophthamology	411	523	656	411	523	656
15 Medical Oncology	33	42	53	33	42	53
16 Chemotherapy and Radiotherapy	253	249	227	253	249	227
17 Rheumatology	11	13	16	11	13	16
18 Dermatology	11	9	7	11	9	7
19 Head and Neck Surgery	17	19	22	17	19	22
20 Dentistry	214	234	251	214	234	251
21 Upper GIT Surgery	4	5	5	4	5	5
22 Colorectal Surgery	58	63	69	58	63	69
23 Orthopaedics	238	251	261	238	251	261
24 Urology	184	186	190	184	186	190
25 Vascular Surgery	17	21	26	17	21	26
26 General Medicine	136	160	184	136	160	184
27 General Surgery	72	82	93	72	82	93
28 Breast Surgery	23	24	25	23	24	25
29 Plastic and Reconstructive Surgery	180	206	234	180	206	234
30 Gynaecology	283	278	270	283	278	270
31 Obstetrics	6	7	7	6	7	7
32 Babies	4	3	3	4	3	3
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	31	35	39	31	35	39
36 Burns	0	0	0	0	0	0
37 Psychiatry	159	186	211	159	186	211
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	26	30	34	26	30	34
40 Non-acute	282	368	467	282	368	467
Grand Total	4,033	4,551	5,110	4,033	4,551	5,110

Overnight Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	44	51	58	180	198	220
02 Interventional Cardiology	107	125	147	368	426	508
03 Cardiothoracic Surgery	33	33	33	290	315	330
04 Respiratory Medicine	120	130	138	404	383	383
05 Gastroenterology	31	36	43	275	346	426
06 GIT Endodoscopy	28	28	27	110	106	104
07 Neurology	31	35	38	261	302	337
08 Neurosurgery	60	66	73	484	503	523
09 Endocrinology	18	21	24	143	162	184
10 Renal Medicine	10	11	13	159	182	217
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	24	27	29	71	124	143
13 ENT	142	130	120	149	136	125
14 Ophthamology	31	31	30	36	43	43
15 Medical Oncology	23	24	24	313	306	297
16 Chemotherapy and Radiotherapy	1	1	0	2	1	0
17 Rheumatology	7	8	8	77	56	60
18 Dermatology	3	3	3	7	8	8
19 Head and Neck Surgery	24	28	31	45	44	45
20 Dentistry	24	17	12	24	21	15
21 Upper GIT Surgery	79	79	78	206	193	178
22 Colorectal Surgery	40	41	42	288	291	288
23 Orthopaedics	297	320	344	1,112	1,178	1,271
24 Urology	101	109	115	233	245	240
25 Vascular Surgery	43	42	41	176	166	152
26 General Medicine	73	83	95	491	567	659
27 General Surgery	122	127	131	314	329	358
28 Breast Surgery	38	40	40	98	87	79
29 Plastic and Reconstructive Surgery	42	44	45	111	137	138
30 Gynaecology	82	73	62	291	226	171
31 Obstetrics	198	194	188	1,029	924	831
32 Babies	201	197	194	1,052	971	910
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	4	5	5	79	92	103
35 Drug & Alcohol	16	18	20	333	401	464
36 Burns	1	1	1	1	10	9
37 Psychiatry	59	68	75	1,315	1,582	1,824
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	7	7	7	15	16	15
40 Non-acute	125	156	191	1,981	2,397	2,864
Grand Total	2,291	2,406	2,524	12,525	13,473	14,520

PROFILE OF PROJECTED PRIVATE HOSPITAL WORKLOAD ACCORDING TO PLACE OF RESIDENCE – with assumed market share

KIAMA

Same Day Admissions (80%)

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	7	8	9	7	8	9
02 Interventional Cardiology	69	82	98	69	82	98
03 Cardiothoracic Surgery	3	3	3	3	3	3
04 Respiratory Medicine	2	2	2	2	2	2
05 Gastroenterology	7	8	10	7	8	10
06 GIT Endodoscopy	570	573	564	570	573	564
07 Neurology	5	5	6	5	5	6
08 Neurosurgery	2	2	2	2	2	2
09 Endocrinology	5	6	7	5	6	7
10 Renal Medicine	4	5	6	4	5	6
11 Renal Dialysis	118	161	218	118	161	218
12 Haematology	31	42	56	31	42	56
13 ENT	47	49	51	47	49	51
14 Ophthamology	212	266	339	212	266	339
15 Medical Oncology	17	21	27	17	21	27
16 Chemotherapy and Radiotherapy	186	163	149	186	163	149
17 Rheumatology	5	6	7	5	6	7
18 Dermatology	5	4	3	5	4	3
19 Head and Neck Surgery	7	8	10	7	8	10
20 Dentistry	108	118	129	108	118	129
21 Upper GIT Surgery	4	4	5	4	4	5
22 Colorectal Surgery	26	29	33	26	29	33
23 Orthopaedics	118	125	133	118	125	133
24 Urology	91	97	104	91	97	104
25 Vascular Surgery	10	12	13	10	12	13
26 General Medicine	118	131	144	118	131	144
27 General Surgery	32	37	43	32	37	43
28 Breast Surgery	11	11	12	11	11	12
29 Plastic and Reconstructive Surger	90	105	123	90	105	123
30 Gynaecology	110	110	109	110	110	109
31 Obstetrics	2	3	3	2	3	3
32 Babies	1	1	1	1	1	1
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	19	22	25	19	22	25
36 Burns	0	0	0	0	0	0
37 Psychiatry	70	84	97	70	84	97
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	16	19	23	16	19	23
40 Non-acute	144	186	239	144	186	239
Grand Total	2,272	2,509	2,805	2,272	2,509	2,805

Overnight Admissions (85%)

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	22	25	27	144	139	142
02 Interventional Cardiology	44	51	60	126	159	189
03 Cardiothoracic Surgery	13	13	14	156	157	168
04 Respiratory Medicine	52	57	61	159	152	156
05 Gastroenterology	14	16	20	97	133	154
06 GIT Endodoscopy	21	22	23	72	85	93
07 Neurology	14	16	17	171	172	190
08 Neurosurgery	23	26	29	193	181	194
09 Endocrinology	13	14	16	59	64	70
10 Renal Medicine	5	5	6	5	5	6
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	12	13	14	36	42	48
13 ENT	62	60	58	67	69	67
14 Ophthamology	21	20	19	21	23	22
15 Medical Oncology	11	11	11	97	91	94
16 Chemotherapy and Radiotherapy	0	0	0	2	1	1
17 Rheumatology	5	5	5	24	30	27
18 Dermatology	1	1	1	1	1	1
19 Head and Neck Surgery	10	12	13	27	28	28
20 Dentistry	12	9	7	12	11	8
21 Upper GIT Surgery	29	30	32	95	97	97
22 Colorectal Surgery	29	29	30	218	213	208
23 Orthopaedics	148	162	180	708	795	910
24 Urology	46	50	54	122	142	147
25 Vascular Surgery	34	33	34	235	179	189
26 General Medicine	38	42	46	152	166	184
27 General Surgery	59	62	66	247	262	292
28 Breast Surgery	22	23	24	71	62	55
29 Plastic and Reconstructive Surge	19	19	19	73	101	101
30 Gynaecology	51	47	38	205	161	114
31 Obstetrics	67	66	66	326	297	275
32 Babies	64	64	67	329	313	307
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	2	3	3	67	100	116
35 Drug & Alcohol	6	7	8	96	112	127
36 Burns	0	0	0	0	0	0
37 Psychiatry	24	27	31	366	503	600
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	6	6	6	60	48	43
40 Non-acute	67	84	105	1,253	1,504	1,793
Grand Total	1,067	1,131	1,213	6,092	6,601	7,221

PROFILE OF PROJECTED PRIVATE HOSPITAL WORKLOAD ACCORDING TO PLACE OF RESIDENCE – with assumed market share

TOTAL PRIMARY CATCHMENT

Same Day Admissions

	Projected Admissions			Projected Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	65	73	85	65	73	85
02 Interventional Cardiology	580	681	808	580	681	808
03 Cardiothoracic Surgery	16	16	16	16	16	16
04 Respiratory Medicine	16	17	18	16	17	18
05 Gastroenterology	63	79	96	63	79	96
06 GIT Endodoscopy	3,584	3,654	3,710	3,584	3,654	3,710
07 Neurology	43	50	59	43	50	59
08 Neurosurgery	21	22	23	21	22	23
09 Endocrinology	42	53	66	42	53	66
10 Renal Medicine	34	43	54	34	43	54
11 Renal Dialysis	2,018	2,746	3,669	2,018	2,746	3,669
12 Haematology	263	343	438	263	343	438
13 ENT	334	348	363	334	348	363
14 Ophthamology	1,910	2,396	3,023	1,910	2,396	3,023
15 Medical Oncology	150	191	240	150	191	240
16 Chemotherapy and Radiotherapy	1,183	1,138	1,089	1,183	1,138	1,089
17 Rheumatology	47	57	68	47	57	68
18 Dermatology	45	38	31	45	38	31
19 Head and Neck Surgery	67	80	92	67	80	92
20 Dentistry	873	976	1,079	873	976	1,079
21 Upper GIT Surgery	19	22	25	19	22	25
22 Colorectal Surgery	241	271	302	241	271	302
23 Orthopaedics	1,003	1,079	1,154	1,003	1,079	1,154
24 Urology	790	834	891	790	834	891
25 Vascular Surgery	79	97	119	79	97	119
26 General Medicine	582	694	816	582	694	816
27 General Surgery	295	346	403	295	346	403
28 Breast Surgery	95	102	107	95	102	107
29 Plastic and Reconstructive Surge	795	920	1,063	795	920	1,063
30 Gynaecology	1,066	1,081	1,085	1,066	1,081	1,085
31 Obstetrics	24	26	28	24	26	28
32 Babies	15	13	11	15	13	11
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	133	153	173	133	153	173
36 Burns	1	1	1	1	1	1
37 Psychiatry	649	779	909	649	779	909
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	115	136	158	115	136	158
40 Non-acute	1,492	1,902	2,409	1,492	1,902	2,409
Grand Total	18,748	21,454	24,684	18,748	21,454	24,684

Overnight Admissions

	Projected Admissions			Projected Days		
SRG	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	193	221	249	1,176	1,287	1,404
02 Interventional Cardiology	492	576	681	1,342	1,660	2,018
03 Cardiothoracic Surgery	145	147	148	1,368	1,450	1,532
04 Respiratory Medicine	481	526	569	1,918	1,736	1,707
05 Gastroenterology	126	151	180	767	960	1,168
06 GIT Endodoscopy	128	128	126	431	436	440
07 Neurology	130	144	160	1,098	1,202	1,308
08 Neurosurgery	259	292	330	1,999	2,066	2,214
09 Endocrinology	71	83	97	523	594	677
10 Renal Medicine	42	49	56	282	349	416
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	103	114	126	472	579	658
13 ENT	465	442	422	494	475	453
14 Ophthamology	143	140	135	157	164	158
15 Medical Oncology	101	102	101	1,079	1,062	1,046
16 Chemotherapy and Radiotherapy	2	1	1	4	3	2
17 Rheumatology	33	34	35	220	202	203
18 Dermatology	12	12	12	69	69	67
19 Head and Neck Surgery	96	111	126	203	211	221
20 Dentistry	61	47	35	62	56	43
21 Upper GIT Surgery	294	303	309	811	773	734
22 Colorectal Surgery	176	182	188	1,312	1,297	1,288
23 Orthopaedics	1,219	1,327	1,454	6,085	6,627	7,348
24 Urology	422	456	489	1,321	1,333	1,324
25 Vascular Surgery	198	195	192	1,157	1,065	1,038
26 General Medicine	308	351	402	1,562	1,822	2,093
27 General Surgery	495	521	551	1,684	1,831	2,060
28 Breast Surgery	155	164	170	443	392	353
29 Plastic and Reconstructive Surge	173	177	177	608	646	628
30 Gynaecology	343	309	267	1,280	1,003	769
31 Obstetrics	677	682	685	3,395	3,130	2,905
32 Babies	683	694	715	3,495	3,353	3,279
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	12	14	15	313	391	458
35 Drug & Alcohol	60	69	77	979	1,187	1,394
36 Burns	2	2	2	2	11	10
37 Psychiatry	222	260	297	4,376	5,439	6,449
38 Acute Rehabilitation	1	1	1	1	1	1
39 Ungroupable	33	31	30	152	132	119
40 Non-acute	561	692	848	8,635	10,158	11,947
Grand Total	9,122	9,751	10,460	51,276	55,151	59,930

The preceding tables indicate that there is potential for development of a substantial private hospital servicing the Illawarra precinct as defined. However, the vision for this development is for a tertiary referral hospital that would service a catchment well beyond the 4 LGAs identified in the primary catchment. Achievement of a tertiary referral role is dependent upon the ability of the operator to attract the clinical staff and supporting infrastructure necessary to support the degree of specialisation proposed. If the operator is able to establish high quality tertiary services it is reasonable to expect the catchment to expand to include a significant portion of north eastern Victoria and south eastern NSW (where it would compete with Sydney Metropolitan and ACT hospitals for patients). Typically tertiary referral hospitals attract a significant share of their work from outside their primary catchment – and this work covers both tertiary and non-tertiary admissions. The expanded catchment tends to mainly occur for overnight admissions though there is also an impact on same day admissions.

To estimate the impact of the tertiary role on the overall hospital volumes we have assumed that 10% of same day admissions and 20% of overnight admissions come from outside the primary catchment. The impact on the projected hospital workload is shown in the following table. Note that the projections at this stage make no allowance for staging of the development.

PROFILE OF PROJECTED PRIVATE HOSPITAL WORKLOAD ACCORDING TO PLACE OF RESIDENCE – with inflows from outside primary catchment

TOTAL ACUTE HOSPITAL

Same Day Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	72	81	94	72	81	94
02 Interventional Cardiology	645	757	897	645	757	897
03 Cardiothoracic Surgery	18	17	17	18	17	17
04 Respiratory Medicine	18	19	20	18	19	20
05 Gastroenterology	70	87	106	70	87	106
06 GIT Endodoscopy	3,982	4,060	4,122	3,982	4,060	4,122
07 Neurology	47	56	65	47	56	65
08 Neurosurgery	23	24	25	23	24	25
09 Endocrinology	47	59	73	47	59	73
10 Renal Medicine	38	48	60	38	48	60
11 Renal Dialysis	2,242	3,051	4,077	2,242	3,051	4,077
12 Haematology	292	381	487	292	381	487
13 ENT	371	386	404	371	386	404
14 Ophthamology	2,122	2,662	3,359	2,122	2,662	3,359
15 Medical Oncology	167	212	267	167	212	267
16 Chemotherapy and Radiotherapy	1,315	1,265	1,210	1,315	1,265	1,210
17 Rheumatology	53	64	76	53	64	76
18 Dermatology	50	43	35	50	43	35
19 Head and Neck Surgery	74	88	103	74	88	103
20 Dentistry	970	1,084	1,199	970	1,084	1,199
21 Upper GIT Surgery	21	24	28	21	24	28
22 Colorectal Surgery	268	301	336	268	301	336
23 Orthopaedics	1,115	1,198	1,282	1,115	1,198	1,282
24 Urology	878	926	990	878	926	990
25 Vascular Surgery	88	108	133	88	108	133
26 General Medicine	646	771	906	646	771	906
27 General Surgery	328	384	448	328	384	448
28 Breast Surgery	106	113	119	106	113	119
29 Plastic and Reconstructive Surgery	883	1,022	1,182	883	1,022	1,182
30 Gynaecology	1,184	1,201	1,206	1,184	1,201	1,206
31 Obstetrics	26	29	31	26	29	31
32 Babies	16	14	12	16	14	12
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	0	0	0	0	0	0
35 Drug & Alcohol	147	170	192	147	170	192
36 Burns	1	1	1	1	1	1
37 Psychiatry	721	865	1,010	721	865	1,010
38 Acute Rehabilitation	0	0	0	0	0	0
39 Ungroupable	128	151	175	128	151	175
40 Non-acute	1,658	2,113	2,677	1,658	2,113	2,677
Grand Total	20,829	23,836	27,424	20,829	23,836	27,424

Overnight Admissions

SRG	Projected Admissions			Projected Days		
	2011_12	2016_17	2021_22	2011_12	2016_17	2021_22
01 Cardiology	241	276	311	1,470	1,608	1,755
02 Interventional Cardiology	615	720	852	1,677	2,075	2,523
03 Cardiothoracic Surgery	182	183	185	1,711	1,813	1,915
04 Respiratory Medicine	601	657	711	2,397	2,170	2,133
05 Gastroenterology	158	189	226	959	1,200	1,460
06 GIT Endodoscopy	159	159	158	539	545	550
07 Neurology	163	180	200	1,372	1,502	1,636
08 Neurosurgery	323	365	413	2,499	2,583	2,767
09 Endocrinology	89	104	122	653	742	846
10 Renal Medicine	53	61	70	353	437	519
11 Renal Dialysis	0	0	0	0	0	0
12 Haematology	129	143	158	590	723	823
13 ENT	582	553	528	617	594	566
14 Ophthamology	179	175	168	196	205	198
15 Medical Oncology	126	127	127	1,348	1,327	1,307
16 Chemotherapy and Radiotherapy	2	2	1	5	3	3
17 Rheumatology	41	43	44	275	253	254
18 Dermatology	15	15	15	86	86	84
19 Head and Neck Surgery	120	138	157	253	264	276
20 Dentistry	77	59	44	78	70	54
21 Upper GIT Surgery	368	378	386	1,013	966	918
22 Colorectal Surgery	220	227	235	1,641	1,622	1,610
23 Orthopaedics	1,524	1,658	1,817	7,606	8,284	9,185
24 Urology	527	570	611	1,651	1,666	1,655
25 Vascular Surgery	248	244	240	1,446	1,331	1,298
26 General Medicine	386	439	502	1,952	2,277	2,616
27 General Surgery	619	652	689	2,105	2,289	2,575
28 Breast Surgery	194	205	213	553	490	441
29 Plastic and Reconstructive Surgery	216	221	221	760	807	785
30 Gynaecology	429	386	334	1,600	1,253	961
31 Obstetrics	847	853	857	4,244	3,913	3,631
32 Babies	854	868	894	4,369	4,191	4,099
33 Transplantation	0	0	0	0	0	0
34 Tracheostomy	15	17	19	392	488	572
35 Drug & Alcohol	76	86	96	1,224	1,483	1,743
36 Burns	2	2	2	3	14	12
37 Psychiatry	278	325	371	5,470	6,799	8,062
38 Acute Rehabilitation	1	1	1	1	1	1
39 Ungroupable	41	39	38	191	165	149
40 Non-acute	702	865	1,060	10,794	12,697	14,934
Grand Total	11,402	12,189	13,075	64,095	68,939	74,913

Under the assumptions modelled in this report it is evident that there is potential for development of a large scale private hospital consistent with the vision outlined by La Vie Developments. Naturally the projections in this report are dependent upon the ability of an operator to attract sufficient clinical (general practitioner, specialist, nursing and other paramedical staff) to the facility.

To some extent the projections and modelling may be regarded as ambitious – we have modelled higher than average admission rates (consistent with a well-serviced area) and a strong market share (consistent with expectations for the major private hospital in the area). On the other hand we have not taken account of potential closure and/or role changes of competing private facilities. This is a possibility, especially in the Wollongong and Shellharbour markets. A dominant private provider may cause a re-assessment by existing providers. This would significantly increase the projected workload at the proposed development – a consequence that has not been factored into our analyses. We have also taken no account of potential for contracting to provide public hospital services. It is not possible to estimate the extent to which this could generate additional work but the proposed hospital should have some capacity to accommodate this additional source of patients.

By 2021, in full operation the proposed development could comprise –

Specialist Medical Centre and Day Procedure Centre (Surgicentre) with approximately 23,500 same day admissions per annum (including Interventional Cardiology) plus 4,000 Renal Dialysis admissions. It would be sensible to support this function with a modest capacity to allow overnight stays where necessary. This greatly increases the range and complexity of work that can be attempted in the facility – allowing admission of patients where same day discharge is possible but not assured. The inclusion of high dependency/intensive care support would allow Interventional Cardiology to be introduced early in the development.

Free standing Obstetric Unit accommodating approximately 900 deliveries per annum. The projections for this unit show decreasing requirements for beddays consistent with trends towards shorter average stay. However, this may be offset to some extent by increasing deliveries. Data for the past two years have shown a reversal of Australia's decreasing birth rates – and this is not fully factored into projections – as it is not clear that this reversal will continue. With a projected requirement for 4,250 obstetric beddays in 2011 and uncertainty about obstetric trends it would be prudent to plan to accommodate around 4,500 beddays. At occupancy of 65-70% this would require 18 – 20 beds.

Tertiary referral hospital able to accommodate 11,500 overnight admissions (excluding the free standing obstetrics and babies) using approximately 68,000 beddays. Interventional Cardiology would generate around 2,000 admissions, split between same day and overnight. The projection of beddays is dependent upon a continuation of the trends towards decreasing average length of stay for overnight admissions. As the hospital will have a combination of both elective and emergency admissions it needs to have sufficient capacity to accommodate the emergency component without disrupting the elective component. The elective component is effectively managed across 5 days rather than a full week. Both of these factors reduce the overall occupancy. If we assume occupancy of 70% for the overnight admissions, excluding those accommodated in the Obstetric Unit, we have a requirement for 270 beds. If a tertiary private hospital of this size becomes fully operational in the precinct it is likely that at least one private hospital will close and/or change role. This could yield another 50+ beds worth of overnight activity. Further workload could be generated by public-sector contracts. It would be wise to consider these eventualities in planning for this development, suggesting a planning framework within 270-320+ overnight beds, excluding the free-standing Obstetric unit of 20 beds. An allowance should also be made for 10 overnight beds in the day surgery centre and a number of holding beds in the proposed casualty.

Staging of the development would ensure that the supply of services matched the emerging demand and would allow the hospital to progressively develop its reputation and infrastructure.

These projections are generally consistent with the current scale and timing of the proposed development as outlined below.

Stage 1

Illawarra International Specialist and Surgicentre including 10 overnight beds and two intensive care beds

Stage 2

Pathology and Radiology Units

Stage 3

24 hr Medical Centre, pharmacy and casualty with 10 overnight beds

Stage 4

Stand alone obstetric unit with 20 overnight single bed suites

Stage 5

Illawarra International Hospital with 310 overnight beds

Stage 6

Nurse, resident medical officer and medical student accommodation – integral with the tertiary referral hospital education programme

Stage 7

Illawarra International Aged and Disability Centre - with 280 beds, mainly high care. Senior's independent living units.

Stage 8

Educational Facility- with associated accommodation for patient's relatives and outpatient accommodation while undergoing extended therapies.

Appendix

HARDES AND ASSOCIATES

PROJECT LIST

Hardes and Associates
Strategic Planning for Healthcare
PO Box 5089
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Email: greghardes@bigpond.com

AUSTRALIA

New South Wales

Public Sector

Demand/supply and scenario modelling for NSW Department of Health annually from July 1994 to present

Review of Demand-drivers for the Independent Pricing and Review Tribunal (IPART) in 2000 and 2004

Capacity study for NSW Department of Health in 2005, including demand projections for major submission to Treasury

Demand projections and modelling for relocation of Sydney Children's Hospital -2000

Demand projections and emergency admissions review/modelling for Northern Sydney Area Health Service - 2003

Demand and supply projections for Newcastle Mater Misericordiae Hospital (Sisters of Charity) - 2002

Demand projections and scenario modelling for Central and South West Sydney Area Health Service - 2005

Relative utilisation review, comparison of Veterans and non-Veterans, demand/supply projections and scenario modelling software for NSW Department of Veterans Affairs – 2005 and 2006

Private Sector

Market Opportunity Analysis for numerous private hospital groups over a period of 10 years including HCoA, Mayne Healthcare, Ramsay Healthcare, Health Care Corporation, Little Company of Mary Healthcare, Healthecare, NIB Private Hospital, Sisters of Charity, Sydney Adventist Hospital, St Vincents Hospital, St John of God Healthcare Alpha Healthcare, Maitland Private Hospital, Toronto Private Hospital and Brisbane Waters Private Hospital.

Specific projects included -

Co-located private hospital development on the Royal North Shore Hospital campus (HCoA and Ramsay Health Care)

Co-located private hospital development and/or takeover of existing private hospitals at St George (HCoA)

Co-located private hospital development on the Prince Henry/POW campus (HCoA)

Co-located private hospital development on the campus of Liverpool Hospital (HCoA, HCC)

Co-located private hospital development on the campus of Nepean Hospital (HCoA), HCC)

Co-located private hospital development on the campus of Royal Prince Alfred Hospital (HCoA)

Co-located private hospital development on the campus of Armidale Hospital (HCoA, Ramsay, Alpha)

Co-located private hospital development on the John Hunter Hospital campus (NIB, HCoA)

Proposed day hospital development on the campus of Bankstown Hospital (NIB)

Co-located private hospital development at Mildura (Alpha Healthcare, HCoA, Ramsay)

Redevelopment of Sydney Adventist Hospital (Sydney Adventist)

Demand analysis and modelling for Westmead Private Hospital (Alpha Healthcare)

Market opportunity analysis for Pittwater Radiology and Medical Imaging Australia

Private hospital demand projections for developments at Bankstown and Ryde (Alpha Healthcare)

Analysis of market shares and relative utilisation for Ramsay Healthcare for submission to ACCC in association with proposed purchase of Affinity Healthcare – covering market shares for all Ramsay and Mayne hospitals in NSW, 2005.

Queensland

Public Sector

Demand/supply and scenario modelling for NSW Department of Health annually from July 1999 to present. Contract renewed up to 2010.

Demand/supply and scenario modelling for NSW Department of Health for Queensland Children's Hospital development strategy, 2007

Demand/supply and scenario modelling for NSW Department of Health for South East Queensland development strategy, 2006

Health services strategic planning framework, Northern Zone, Queensland Health, 2004

Health services strategic planning framework, Southern Zone, Queensland Health, 2004

Demand/supply and scenario modelling for Gold Coast Hospital, 2005

Demand/supply and scenario modelling for Mater Public Hospitals, 2004

Review of relative utilisation and referral patterns by Gold Coast residents – Gold Coast Medical Association. 2002

Relative utilisation review, comparison of Veterans and non-Veterans, demand/supply projections and scenario modelling software for Queensland Department of Veterans Affairs – 2005 and 2006

Private Sector

Market Opportunity Analysis for numerous private hospital groups over a period of 10 years including HCoA, Mayne Healthcare, Ramsay Healthcare, Uniting Healthcare, Wesley Private

Hospital, Mater Healthcare – Central Queensland, Cairns Private Hospital, St Andrews Private Hospital – Toowoomba, Mt Olivet Private Hospital, Brisbane Private Hospital and Mater Brisbane Private Hospitals.

Specific projects included -

Co-located private hospital development at Noosa (HCoA)

Co-located private hospital development at Princess Alexandra (Ramsay)

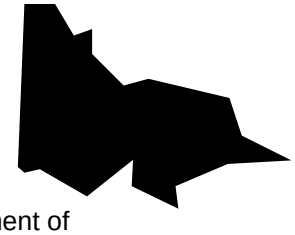
Co-located private hospital development at Robina (Sisters of Charity, HCoA, Ramsay)

Redevelopment of Wesley Hospital (Wesley Healthcare)

Private hospital feasibility analyses for Gold Coast, Mount Ommaney and Mount Gravatt (Wesley Healthcare)

Analysis of market shares and relative utilisation for Ramsay Healthcare for submission to ACCC in association with proposed purchase of Affinity Healthcare – covering market shares for all Ramsay and Mayne hospitals in Queensland, 2005.

Analysis of market shares, relative utilisation and demand projections for Mater CQ group in 2005 and 2006



Victoria

Public Sector

Demand/supply and scenario modelling for acute hospitals for Victorian Department of Human Services in 2002 and 2003. This formed the basis of the Metropolitan Health Strategy.

Demand/supply and scenario modelling for disability services for Victorian Department of Human Services in 2003

Demand/supply and scenario modelling for homelessness services for Victorian Department of Human Services in 2003

Demand/supply and scenario modelling for child protection services for Victorian Department of Human Services in 2003

Demand/supply and scenario modelling for dental services for Victorian Department of Human Services in 2003

Demand/supply and scenario modelling for ambulance services for Victorian Department of Human Services in 2003

Demand/supply and scenario modelling for community health services for Victorian Department of Human Services in 2003

Demand/supply and scenario modelling for mental health services for Victorian Department of Human Services in 2003

Relative utilisation review, comparison of Veterans and non-Veterans, demand/supply projections and scenario modelling software for Victorian Department of Veterans Affairs – 2004, 2005 and 2006

Private Sector

Market Opportunity Analysis for numerous private hospital groups over a period of 10 years including HCoA, Mayne Healthcare, Ramsay Healthcare, Benchmark Healthcare, Mercy Private and St Vincents Private, Epworth Group, Little Company of Mary Healthcare, St John of God Healthcare.

3 Year contract (commencing 2005) for demand/supply modelling and Market Opportunity Analysis for St John of God Healthcare, Victoria

Specific projects included -

Co-located private hospital development at Mildura (Alpha Healthcare, HCoA, Ramsay)

Co-located private hospital development at Berwick (Alpha Healthcare, HCoA, Ramsay)

Demand projections and scenario modelling for redevelopment of Ballarat Private Hospital

Demand projections and scenario modelling for redevelopment of Mercy/St Vincents Private Hospital.

Analysis of market shares and relative utilisation for Ramsay Healthcare for submission to ACCC in association with proposed purchase of Affinity Healthcare – covering market shares for all Ramsay and Mayne hospitals in Victoria, 2005.

South Australia

Public Sector

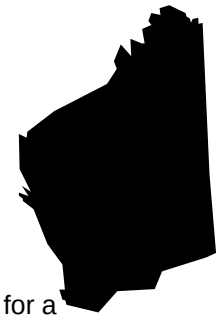
Demand/supply and scenario modelling for acute hospitals for South Australian Department of Health in 2005. Additional 2 year contract for updates in 2006 and 2007. Updated again to 2008 and 2009.

Private Sector

Market Opportunity Analysis for numerous private hospital groups over a period of 6 years including Mayne Health, Ramsay Healthcare, Little Company of Mary Healthcare and Benchmark Healthcare.

Analysis of market shares, relative utilisation and demand projections for Little Company of Mary healthcare group in 2007

Analysis of market shares and relative utilisation for Ramsay Healthcare for submission to ACCC in association with proposed purchase of Affinity Healthcare – covering market shares for all Ramsay and Mayne hospitals in South Australia, 2005.



Western Australia

Public Sector

Demand/supply and scenario modelling for acute hospitals for West Australian Department of Health in 2005 and 2006 for Health Reform Implementation Task Force. Renewed contract for updates in 2007. Renewed again for a further three years up up to 2010.

Private Sector

Market Opportunity Analysis for numerous private hospital groups over a period of 6 years including Mayne Health, Ramsay Healthcare and St John of God Healthcare.

Analysis of market shares and relative utilisation for Ramsay Healthcare for submission to ACCC in association with proposed purchase of Affinity Healthcare – covering market shares for all Ramsay and Mayne hospitals in South Australia, 2005.

3 Year contract (commencing 2005) for demand/supply modelling and Market Opportunity Analysis for St John of God Healthcare, West Australia

Tasmania

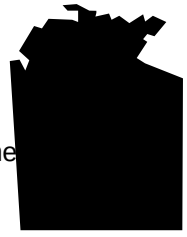
Public Sector

Demand/supply and scenario modelling for acute hospitals for Tasmanian Department of Health in 2006 and 2007

Private Sector

Market Opportunity Analysis for Calvary Private Hospital in relation to cardiovascular services - 2004.

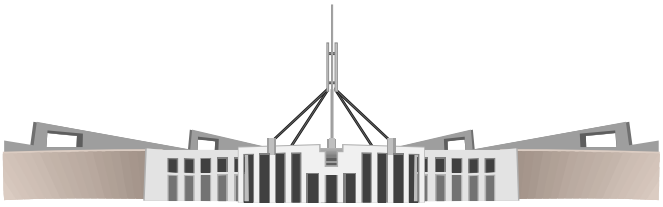
Northern Territory



Public Sector

Demand/supply and scenario modelling for acute hospitals for Northern Territory Departme of Health in 2000. Review of potential for expansion of private sector services.

Australian Capital Territory



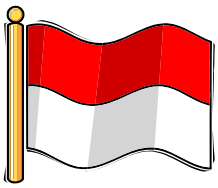
Public Sector

Demand forecasts, based upon NSW trend parameters for acute hospitals, for ACT in 1998 and 2003.

Demand/supply and scenario modelling for acute hospitals for ACT Department of Health in 2007.

INTERNATIONAL

Indonesia



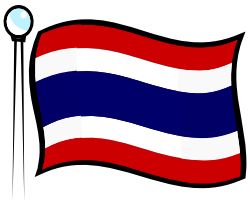
Demand projections and development options for a private hospital on the campus of Rumah Sakit Atma Jaya in Pluitt, North Jakarta, Indonesia
(Ramsay Health Care and P.T. Andika Energindo) 2000

Demand analysis for a new nursing home (first in Indonesia) in Jakarta
(Ramsay Health Care and Yayason Rumah Sakit Bhayangkari) 2001

Demand analysis and projections for an international private hospital in Bali
(Ramsay Health Care) 1999

Demand review and projections for the development Master Plan for Rumah Sakit Santo Yusup, a 250 bed hospital in Bandung, Indonesia
(Ramsay Health Care and Perkumpulan Perhimpunan Santo Borromeus) 2000

Thailand

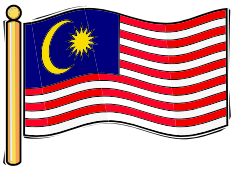


Demand review and projections for development of a 130 bed private hospital in Nonthaburi, an expanding Province on the outskirts of Bangkok
(Ramsay Health Care and Hi Tech Medical Co.) 2000

India

Demand review and projections for the development of a new private hospital in Gurgaon, south of New Delhi
(Health Care of Australia and Oberoi) 1997

Malaysia



Demand review and projections for the development of a new private hospital in Shah Alam, Kuala Lumpur
(Ramsay Health Care and TTDI development) 1997

Demand review and projections for the development of a new staged private hospital in Johor Bharu (Malaysia) (Ramsay Health Care and Daiman Development Berhad) 2001

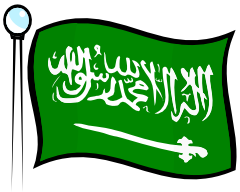
Demand review and projections for the development of a new staged private hospital development in Kejang (Malaysia) (Ramsay Health Care) 2001

Brunei

Review of potential for recommissioning of Jeradong Park Medical Centre – Brunei – (Wesley Health Care) 2002

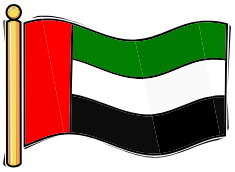
Saudi Arabia

Review of potential for privatisation/corporatisation of newly build but unoccupied King Fahed Medical City, Riyadh, Saudi Arabia. (World Bank) 2004



United Arab Emirates

Review of demand potential for development of a private hospital at Bani Yas, Abu Dhabi, United Arab Emirates. (Hospital Developments International) 2006



United Kingdom

Orthopaedic relative utilisation rates review and demand/supply projections for the entire UK for West Midlands Strategic Health Authority. (Aspen Medical) 2005