Appendix E

ESTIMATED DEMAND

The following sections indicate the planning assumptions and the estimated activity to 2001 and 2006 for the following services:

- Acute hospital services (overnight or day stays/visits in hospitals)
- Non-acute hospital services
- Acute psychiatric services
- Non-inpatient hospital services (outpatient clinics, emergency department attendances)
- Community based services (acute and non-acute)

Acute Hospital Demand for SWS Residents

A forecast tool APPI (Activity Projections Plus Interventions) is used by NSW Health to forecast acute activity. APPI makes forecasts for 98% of SWSAHS's current hospital separations and 83% of SWSAHS's current hospital bed days. APPI excludes acute psychiatric activity. Acute psychiatric and non acute cases in hospitals account for 2% of all separations but 17% of all bed days.

APPI contains a number of assumptions when forecasting activity to 2001 and 2006. Some of these include:

- Rates of utilisation. For example, Standardised Separation Rates are set to 100 (state average). Therefore a service which is "overutilised" is assumed to move towards the state average and the number of separations projected is less. Similarly where rates are below 100, this is increased to 100 and extra activity is included.
- Trend lines in length of stay and admissions for each of the ESRGs are calculated and then applied to 1996/97 baseline data.
- Projections are based on existing flows (both outflows and inflows), that is, no change in supply or self sufficiency is included.
- There is no assumption made regarding the resources required to achieve the additional activity forecast.

While separations for resident acute demand to 2006 are predicted to grow by 4.3%, the increase in bed days required to support this increase is 0.7% due to declining average length of stay.

	1996/97	**2001**	**2006**
Resident demand			
• Separations	135,500	163,668	193,350
• Bed days	490,007	502,472	522,709

Sub Acute Hospital Demand for SWS Residents

There is no agreed methodology of forecasting sub and non acute activity. However, if acute admissions are growing 4% per annum driven largely by population growth and ageing, it has been assumed that a similar growth in separations could be expected. While it is harder to predict what will happen to non acute length of stay, a reduction of one day has been assumed relating to the development of less invasive acute interventions or the development of more effective drug therapies.

	1996/97	2001	2006
Resident demand			
• Separations	3,059	3,670	4,313
• Bed days	64,914	73,400	81,947
• Average LOS	21.2	20 (assumed)	19 (assumed)
• Statewide beds at 95% occupancy	187	212	236

Acute Psychiatric Demand for SWS Residents

APPI excludes admissions to designated psychiatric units such as Banks House. Other psychiatric admissions to general hospitals are included in the acute forecasts above.

As there is no agreed methodology for projecting psychiatric acute demand, a 4% growth per annum in admission and no decline in length of stay has been assumed. This is a baseline estimate as SWSAHS residents have had poor access to these services.

	1996/97	2001	2006
Resident demand			
• Separations	3,214	3,857	4,532
• Bed days	28,502	34,327	40,335
• Average LOS	8.9	8.9 (assumed)	8.9 (assumed)
• Statewide beds at 90% occupancy	87	104	122

Non-inpatient Hospital Demand for SWS Residents (outpatient clinics, emergency department attendances)

Information on the total amount of outpatient services provided by other Area Health Services for SWS residents is not available. It has been assumed that there is probably a reasonable correlation to the inpatient situation and while the total resident hospital outpatient demand cannot be predicted, the part that will occur in SWSAHS has been estimated.

It is also assumed that there is a strong relationship between the total number of hospital separations and the total number of hospital NAPOOS, and that changes in the number of total separations could be used to predict total hospital NAPOOS.

A 19% increase in hospital separations in SWSAHS will result in an activity increase of 187,364 hospital NAPOOS.

The number of admissions via the emergency department (ED) to other Area Health Services is available, however the number of attendances at EDs outside SWSAHS is not available. The source of many admissions to hospital is via the ED. If admissions are forecast to rise 40% then it can be assumed that attendances will rise by at least 40%.

A second method is to apply a regression line to the past 8 years of ED attendance and admission data. This predicts a 50 % growth in attendance and a 73% growth in admissions through ED. These latter forecasts are considered a better indicator of activity.

	1996/97	2001	2006
Resident demand			
• Attendances	146,717	186,907	220,700
• Admissions	46,341	64,656	80,194

Community Based Demand for SWS Residents (acute and non-acute)

Information is not available on the volume of activity of SWS residents in Community Health Services in other Area Health Services, however, it is assumed that there is some outflow. It has also been assumed that activity is linked to population growth. As clientele at Community Health Centres have been shown to have very little overlap with those attending hospital services, this assumption is considered reasonable.

A 13.6% increase in population will result in an estimated increase in activity from 883,574 occasions of service (OOS) to 1,003,009 OOS.