Factors

Vehicle generation rates vary substantially depending on the types of uses incorporated in the business park, particularly office and retail uses. Where the proportion of office area and retail area are high within the business park, traffic generation rates are generally higher.

Further information on business parks and their traffic generation and parking requirement can be found in *Land Use Traffic Generation - Data and Analysis 27 - Business Parks.*

3.11 Health and community services

3.11.1 Professional consulting rooms

Data is not available.

3.11.2 Extended hours medical centres

Surveys were undertaken in 1991 to determine the extended hours on Sunday and Monday for 19 medical centres in the Sydney region. A range of site variables such as gross floor area, number of consulting rooms and the number of medical practitioners was collected, as well as trip generation data. The variable that best reflected trip generation rate was gross floor area. The number of consulting rooms was the next best indicative variable, interrelated with the floor area.

The variance of generation rates in this data indicates that satisfactory prediction rates can not be recommended. Analysis needs to be based on

comparisons with similar sites. This data can be found in the Land Use Traffic Generation - Data and Analysis 20: Extended Hours Medical Centres report.

Factors

Monday traffic generation rates were observed to be higher than Sunday rates, although on occasions a higher peak parking demand occurred on Sunday. During the Monday evening peak period the mean peak vehicle trip generation rate was 8.8 veh/hr/100 m^2 gross floor area, with a range of 3.1-19.4 veh/hr/100 m^2. In the morning period of 9.00 am to 12.00 pm the mean peak vehicle trip generation rate was 10.4 veh/hr/100 m^2 gross floor area, with a range of 4.4-19.0 veh/hr/100 m^2.

The range in gross floor area of the sites surveyed was 110 to 935 m^2, with a mean of 462 m^2. The number of consulting rooms varied from 2 to 15, with a mean of 7.

The transport mode of patients/visitors was not closely related to the trip generation rate. The average percentage of patients arriving by car was 66%, with the range 14%-94%. If generation rates are corrected for the average mode split, the modified survey data still does not provide a more accurate basis for estimation.

There is a more apparent relationship between the data and the peak parking demand, with a mean of about one car space per 25 m^2 gross floor area. The mean average length of stay was approximately 27 minutes.

3.11.3 Child care centres

Overview

Surveys were undertaken in 1992 of pre-school, long day-care and before / after school care centres in the Sydney region. The best indicator of peak traffic generation was found to be the number of children that attended each centre. The time that traffic activity was at a peak varied with the differing operating hours of the child care centres. Pre-school centres typically had peaks in the periods 8.00-9.00 am and

2.30-4.00pm. Long day-care centres typically had peaks in both commuter peak periods. Before/after school care centres generally have their highest peak activity in the afternoon commuter peak period. The vehicle generation rates given below are the mean peak generation rates for each centre type in the periods specified. As these figures are mean figures, rates may be higher or lower, depending on the circumstances.

Rates

Table 3.6
Traffic generation rates

Centre Type	Peak Vehicle Trips / Child		
	7.00-9.00am	2.30-4.00pm	4.00-6.00pm
Pre-school	1.4	0.8	-
Long-day care	0.8	0.3	0.7
Before/after care	0.5	0.2	0.7

Factors

The centres surveyed had between 25-60 children attending pre-schools, between 29-66 children in long day-care and between 22-55 children in before / after school care. The gross floor area was the next best indicator of traffic generation. The centres surveyed had gross floor areas in the range 145-470 m^2 for pre-schools, 160-595 m^2 for long day-care and 52-150 m^2 for before / after care. The mean floor area per child was 6.7 m^2 for pre-schools, 7.8 m^2 for long-day care and 3.2 m^2 for before / after care.

The mean proportions of children transported to each centre type by car was 94% for the pre-schools, 93% for the long day-care and 75% for the before /after school care.

Parking demand was highest for the pre-school and lowest for the before / after school care, averaging over all centres 0.23 cars per child at any one time, with the average length of stay for all centres being 6.8 minutes.

3.11.4 Private hospitals

Overview

The term *private hospital* refers to those developments referred to in the Private Hospitals and Day Procedures Centre Act, 1988, No. 123 as “premises at which patients are provided with medical, surgical or other treatment, and with ancillary nursing care, for fee, gain or reward”.

Private hospitals are usually identified through the provision of services i.e. general, surgical, obstetric, rehabilitation and psychiatric. Special services (such as paediatric, accident and emergency and cardiac catheterisation) may also be provided by private hospitals with Department of Health approval.

Surveys were undertaken in 1994 of 19 private hospitals in the Sydney region. The best indicator of peak traffic generation or peak vehicle trips (PVT) was found to be a combination of the number of beds (B) and the number of staff per weekday day shift (ASDS). If the average number of staff per weekday day shift (ASDS) is unknown or unavailable the number of beds (B) alone was found to be a good indicator of peak traffic generation or peak vehicle trips (PVT). The models based on numbers of beds (B) should only be used when the average number of staff per weekday day shift (ASDS) is unknown.