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AREA HEALTH SERVICES IN NSW: BASIC POPULATION DATA

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The new structure of rural health services came into effect on March 16, 1996. It comprises eight rural Area Health Services (AHS), replacing 23 District Health Services.

Epidemiology Branch of the Public Health Division maintains the HOIST* data system in a way which makes it relatively straightforward to reaggregate existing data around the new rural AHS structures. As an example of the value of maintaining data in a well-structured statistical database, the data analysis for this paper was completed within several hours from the time the new rural AHS structures were announced.

This article summarises the basic population data for the current Area Health Service structure in NSW. Apart from the changes in rural areas, it also presents data for the revised boundaries of Central Sydney AHS, which now includes Canterbury Local Government Area (LGA), and for the merged South Eastern Sydney Area Health Service. Basic population data for the new administrative structures are given in Table 1, which also shows the previous administrative groupings.

METHOD
One of the population data sets in the HOIST system contains estimates of the resident population of NSW by five-year age group and sex for each LGA in NSW, and for Area and District Health Services, at June 30 and December 31,
for each age-sex combination is shown, with males on the left, females on the right, by five-year age groups. The area of each pyramid is the same, no matter whether it refers to the total population of NSW (6.1 million) or to that of the Far West AHS (52,943). The figures show the relative age and sex distributions of each population.

The overall NSW population pyramid is superimposed on each figure, with the distribution for the AHS shown shaded. Unshaded sections of each bar show percentages where the AHS has a smaller proportion of that age-sex group than for NSW as a whole. When the AHS has a greater proportion than NSW as a whole, there is a marking within the shaded bar to indicate the NSW proportion. The major differences are described in the text with each figure.
FIGURE 1: NSW TOTAL
This overall distribution for NSW is used as a reference distribution for each of the other figures. It shows the basic shape of a low birth-rate population, with perhaps a central bulge in the 20-49 age ranges representing immigrant populations. Broadly speaking, the ages 0-49 are almost equally represented within the population, at about 3-4 per cent for each five-year group, and thereafter the proportions decline.

FIGURE 2: CENTRAL SYDNEY AHS
This distribution highlights the relatively small proportions of children and adolescents aged 0-19, and the larger proportions of younger adults 20-39. Note that this population includes the Canterbury LGA (formerly in Southern Sydney AHS).

FIGURE 3: SOUTH EASTERN SYDNEY AHS
This distribution is similar to that of Central Sydney AHS (Figure 2). It highlights the relatively small proportions of children and adolescents aged 0-19, and the larger proportions of younger adults aged 20-34.

Continued on page 22 →
**FIGURE 4: NORTHERN SYDNEY AHS**
This distribution highlights a relatively "older" population, with a smaller proportion of children and adolescents aged 0-14.

**FIGURE 5: WESTERN SYDNEY AHS**
This distribution is much the same as that of NSW as a whole, but with higher proportions in younger age groups and lower proportions in the older age groups.

**FIGURE 6: WENTWORTH AHS**
This distribution is fairly typical of a "growth" area with relatively few people in the 50-plus age groups and many in the 0-14 age groups.
FIGURE 7: SOUTH WESTERN SYDNEY AHS
This distribution is similar to that for a growth area like Wentworth AHS (Figure 6) but with a slightly higher proportion in the older age groups. Since South Western Sydney includes areas of population growth west of Liverpool and around Campbelltown as well as the "older" areas of Bankstown and Liverpool, it is less homogeneous than Wentworth AHS.

FIGURE 8: CENTRAL COAST AHS
This distribution shows relatively more children aged 0-9, fewer younger people aged 15-29 and larger proportions of people aged 60-plus than NSW as a whole.

FIGURE 9: HUNTER AHS
This distribution is very close to that of NSW as a whole, a characteristic which is regularly noted about the Hunter AHS.
FIGURE 10: ILLAWARRA AHS
Like the Hunter AHS (Figure 9), the Illawarra AHS is very similar to NSW as a whole in its population distribution.

FIGURE 11: NORTHERN RIVERS AHS
Compared with NSW as a whole, this distribution shows more children aged 5-14, fewer young adults aged 20-34, and more people in the age range 60 and above. It is broadly similar to that for the Central Coast AHS (Figure 8).

FIGURE 12: MID NORTH COAST AHS
This distribution is similar to that for the Central Coast AHS (Figure 8) and the Northern Rivers AHS (Figure 11). Compared with NSW as a whole, there are more children aged 5-14, fewer young people aged 15-34, and more people aged 55 and over.
FIGURE 13: NEW ENGLAND AHS
This distribution shows relatively more children and adolescents aged 0-19, and fewer adults aged 20-39, than NSW as a whole.

FIGURE 14: MACQUARIE AHS
This distribution has relatively more children and adolescents aged 0-15, and fewer young people aged 20-34, than NSW as a whole.

FIGURE 15: MID WEST AHS
This distribution shows relatively more young people aged 0-19, and fewer adults aged 20-49, than NSW as a whole.

Continued on page 26
FIGURE 16: FAR WEST AHS
This distribution is one of the few to show more males than females. It has a larger number of children aged 0-14, and fewer young people aged 15-24, than NSW as a whole.

FIGURE 17: GREATER MURRAY AHS
Like that of the Far West AHS, this distribution is one of the few to show more males than females. It has a larger proportion of youth aged 0-19, and relatively fewer adults aged 20-55, than NSW as a whole.

FIGURE 18: SOUTHERN AHS
This distribution shows relatively more children and adolescents aged 0-14, and fewer young people aged 15-29, than NSW as a whole.


**DISCUSSION**

The main value of these population pyramids is to give a quick visual guide to the general demographic features of the populations of the Area Health Services in NSW. The descriptive accounts of the more obvious variations may help to draw attention to age-related health issues that may be of more importance in one AHS than another, and certainly the more extreme differences demonstrate the importance of standardising health indicators before making comparison between Areas.

Broadly speaking, there are four patterns amongst these distributions. The older urban areas in Sydney (Central Sydney, South Eastern Sydney and Northern Sydney) have relatively fewer children and adolescents than the State as a whole. The newer urban areas in Sydney (Western Sydney, Wentworth and South Western Sydney) have relatively more young people in general. The Hunter and Illawarra Areas are similar to the State as a whole. All the rural areas, and the Central Coast, show a pattern of more children and adolescents and fewer young adults. The impact of "retirement" populations is also evident from the Central Coast northwards.

The population estimates given here are based on extrapolating 1993 estimates from the Australian Bureau of Statistics and will differ in minor ways from those given in other sources. Since the rural Areas are of particular interest at the present time, Table 2 gives the estimates reported in the Department's main publication on rural health, which includes projections to the year 2000.

**TABLE 2**

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<th>Rural Area Health Service</th>
<th>This report</th>
<th>Caring for Health: The NSW Govt's vision for rural health</th>
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**NOTE**

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**ACKNOWLEDGMENTS**

Paul Corben provided comments on a previous draft of this report and suggested the form of data presentation.

HOIST is an acronym for Health Outcomes Information Statistical Toolkit, and has been developed since 1991 by Tim Churches, Peter Brandon, Uma Sivararam and Kim Lim as a business tool for Epidemiology Branch of NSW Health.