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A PEDIATRICIAN AND HIS MOTHERS AND INFANTS*

*Michael Gracey MD, PhD, FRACP***

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Pediatricians are in a unique place in society by being able not only to care for the health and well-being of mothers and which, are their clinical responsibility, but also by being able to act as advocates for those patients who are often among the most vulnerable of our population. This article illustrates some of these points by referring to Australian Aboriginals from the vast desert areas of Westerns Australia. In remote areas of Western Australia, Aboriginal infants have high rates of low birth weight, failure to thrive and undernutrition. They also have high rates of respiratory, gastrointestinal and other infections. Aboriginal infant mortality has improved significantly over recent years, but Aboriginal health and mortality rates are still much worse than those of non-Aboriginal children and tend to be worst in more remote parts of the state. Overall, Aboriginal infants less than one year in age were hospitalized 9.5 times more frequently than non-Aboriginal infants for respiratory diseases (such as pneumonia, acute bronchiolitis and asthma); diarrheal diseases and skin infections were other very important causes of hospitalization for Aboriginal infants. Another poorly understood aspect of Aboriginal health is their widespread proneness to urinary tract infections. This is very important now in Australian Aboriginals in whom end-stage renal failure is becoming very prevalent. Rapid social and lifesyle changes have been very important in the poor health status of Aboriginals. They are also subject to severe socio-economic discrimination, underemployment, limited education, overcrowding, social depression and severely depressed housing conditions, relative inaccessibility to adequate and nutritious foodstuffs, and limited access to clinical services. Aboriginal people are prone to obesity, hypertension, type-2 diabetes mellitus and cardiovascular diseases. Overuse of alcohol and tobacco smoking have also become important challenges, particularly among adolescents and young adults. For the past twenty years or so, special programs have been developed to help overcome some of these problems; these include immunization programs, an extensive child health care program, special childhood screening programs, and oral rehydration therapy to reduce the high rates of mortality and morbidity associated with diarrheal diseases. These improvements have been achieved despite a set of socio-economic circumstances that face Aboriginal infants and children who live with adverse social factors. This was termed "Down and Out in 1996" in an editorial in The New Scientist (27 January 1996). A strategy that Australian Aboriginals are using now is to increase their own role through Aboriginal-controlled health and medical services including child health programs. *Key words: Aboriginals, Australia, children, pediatrician.*

Pediatricians are in a unique place in society by being able not only to care for the health and well-being of mothers and babies who are their clinical responsibility, but also to act as advocates for those patients who are often among

* From the Office of Aboriginal Health, Health Department of Western Australia, and from the School of Public Health, Curtin University of Technology, Perth, Australia.

** Principal Medical Advisor, Office of Aboriginal Health, Health Department of Western Australia.

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the most vulnerable sections of our populations. This may be done by arguing for better clinical services and facilities locally, by providing independent facilities and resources for women's indigenous groups and by assisting with local farming, banking and small business enterprises. Female pediatricians are often much more effective in these roles despite initial resistance from males in their entrenched positions of power. This essay will illustrate some of these points by referring to Australian Aboriginals from the vast desert areas of Western Australia.

Maternal and Infant Health Among Australian Aboriginals

It may come as a surprise to this audience to learn that in the 1960's and 1970's the health standards of the Aboriginals, Australia's original inhabitants, were considered to be worse than in any other identifiable groups of Australians, although official census figures were not widely available until the 1970's, when Aborigines were for the first time included in the national census figures. Because the total aboriginal population of Western Australia (WA) is so small and because its population distribution is so sparse and uneven, it is difficult and rather dangerous to generalize about demographic distribution and patterns of health and disease. The following, however, can be stated.

The total land mass of WA (2.4 million square kilometres) is very large and mostly very dry; most of the human population (1.7 million) lives in its coastal capital city (Perth) and the port of Fremantle, and in the closely settled south west part of the state where agriculture, dairying, fishing, forestry and tourism are among the main commercial activities.

Much of the rest of WA is sparsely populated but is wealthy because of its mineral deposits; mining of gold, nickel, iron ore, titanium, mineral sands, zinc, diamonds and the culture of pearls is very active in many parts of the state. Generally speaking, in remote parts of WA, Aboriginal infants have high rates of low birthweight (LBW), growth faltering, failure-to-thrive and undernutrition, particularly from 6 to 36 months of age. They also have high rates of respiratory, gastrointestinal and other infections. Aboriginal infant mortality has improved significantly over recent years (Table I) but Aboriginal health and mortality rates are still much worse than for non-Aboriginal children and tend to be worse in the more remote parts of the state.

The age-standardized (all ages) mortality rate ratios (Aboriginal versus non-Aboriginal) were 2.6 for males and 3.0 for females. The five leading causes of death for Aboriginal males were I. cardiovascular diseases, II. injury and poisoning. III. respiratory diseases, IV. neoplasms, and V. diseases of the digestive system. For Aboriginal females the five main causes of death vere I. cardiovascular diseases; II. neoplasms; III. endocrine, nutritional, metabolic and immune diseases (overwhelmingly diabetes); IV. respiratory diseases; and V. injury and poisoning.

Table I: Infant Mortality Rates in Western Australia

Year	Aboriginal (Rate/Thousand/Year)	Non - Aboriginal (Rate/Thousand/Year)	Relative Rate (Aboriginal: non - Aboriginal)
1976	45.6	12.2	3.7
1977	29.6	11.8	2.5
1978	27.5	10.7	2.6
1979	29.7	10.3	2.9
1980	31.1	8.1	3.8
1981	19.2	7.9	2.4
1982	25.2	8.1	3.1
1983	24.7	7.2	3.4
1984	24.7	8.1	3.0
1985	25.9	7	3.7
1986	20.3	7.8	2.6
1987	18.8	7.1	2.6
1988	28.7	6.2	4.6
1989	22.4	6.9	3.2
1990	16.3	6.1	2.7
1991	19.2	5	3.8
1992	22	5.3	4.2
1993	14.7	4	3.7

Overall, Aboriginal infants (i.e., up to 12 months of age) were hospitalized in WA 9.5 times as frequently as non-Aboriginal infants for respiratory diseases; diarrheal diseases and skin infections were other very important causes of hospitalization for Aboriginal infants. The main causes of hospitalization of Aboriginal infants for respiratory conditions were acute respiratory tract infections (such as acute bronchiolitis and bronchitis), pneumonia and asthma.

The relative rates of hospital admissions (Aboriginal: non-Aboriginal) for respiratory tract disorders in 1 to 4 year-old and 5 to 14 year-old children were 4.8 and 2.2, respectively. At these ages, asthma and pneumonia were major causes of hospital admissions in Aboriginal children; "other respiratory tract diseases" were also prominent. Diarrheal diseases and skin infections became much less prevalent and serious in the older children.

Among 15 to 24 year-olds, the relative rate of hospital respiratory admissions in Aboriginals compared to non-Aboriginals was 2.9. Pneumonia, asthma and "other respiratory tract diseases" were the major causes of respiratory admissions in Aboriginal patients.

Another poorly understood aspect of Aboriginal health is their widespread proneness to urinary tract disease, much more evident in females than in males. This is often detectable in clinically symptomless children and teenagers, years

before clinical disease or its complications are evident. This is very important now in Australian Aboriginals in whom end-stage renal failure is becoming very prevalent, problematical and expensive in terms of screening programs (that are almost non-existent) as well as planning for dietary, clinical and sociological management and, for some patients, regular dialysis or transplantation.

Rapid sociological lifestyle changes have been very important in the poor health status of Aboriginals, and Aboriginal Health Worker involvement is crucial in overcoming some of these problems, particularly the social and rapid lifestyle changes. This includes access to alcohol and store and processed foods (e.g. refined flour and sugar), which are available to many of these people for the first time. As a result, and because of a rapid change from "hunter gatherer" to a remarkably sedentary lifestyle over a very short period of time, these people are particularly prone to a group of "lifestyle" diseases. They are also subject to severe socio-economic discrimination, underemployment, social depression and severely depressed housing conditions. Inappropriate use and overuse of drugs of addiction, including tobacco smoking, have also become important challenges, particularly among adolescents and young adults. General gasoline has been available widely in desert areas for many years. When inhaled, this can cause serious neurological damage; the use of aviation gasoline instead of standard gasoline has had a very beneficial effect on the health of these young children. Aboriginal people are also prone to obesity, hypertension, type-2 diabetes mellitus and cardiovascular disease. Dietary programs, exercise, a healthy lifestyle and avoidance of noxious substances, including cigarette smoke, and control of alcohol consumption, will all need to become components in the development of successful future health plans for groups of vulnerable infants and children like these.

The inequalities in Aboriginal child health are due to many inter-related factors, among which environmental factors are very important. These include inadequate housing, overcrowding, microbiological contamination of living environments, high-risk individual and community hygiene behaviors, difficulties in maintaining basic infrastructure services (e.g., water supplies, sewage and waste disposal) in remote areas, and inadequate domestic skills and hardware.

These factors are complicated by low educational attainment and very limited employment opportunities. Limited access to adequate and nutritious foodstuffs in remote areas is a very important and complex issue that brings in the huge problems of vast distances from food suppliers, the deficiencies of foodstores in remote Aboriginal communities and the much higher prices of basic food items as environmental factors that affect the nutritional health of Australian Aboriginal individuals and communities.

For the past 20 years or so, special programs have been developed to help overcome some of these problems. These include immunization programs, an

extensive 0-5 year child health program, special childhood screening programs, and oral rehydration therapy (ORT) to reduce the high rates of mortality and morbidity associated with diarrheal disease.

There have been some significant improvements in these figures since the early 1970's. These include the decline in rates of gastroenteritis and respiratory tract infections. These improvements have been achieved despite a set of socio-economic circumstances that face Aboriginal infants and children who live with adverse social factors-overcrowding, discrimination, limited educational and employment opportunities, relative inaccessibility to nutritious food and limited access to cilincal services. This was termed "Down and Out in 1996" in an Editorial in The New Scientist (27 January 1996). A strategy that Australian Aboriginals are using now is to increase their own role through Aboriginal-controlled health and medical services including child health programs. These are becoming increasingly involved in planning, in the delivery of health infrastructure training of their own indigenous staff and increasing collaboration with mainstream government health services. Our work is at the forefront of such activities in WA (e.g., Aboriginal Environmental Health Worker Training and Support). There is scope for many more Aboriginal initiatives in such areas in the future.