PAPUA NEW GUINEA

Population 1  5 190 790     Infant mortality rate 1  82 per 1000 live births
Life expectancy at birth 1  56.2 years
Fertility rate 1  3.85
Annual population growth rate 1  3.1%

NUTRITION OVERVIEW

The major nutritional problems are malnutrition, especially among young children and women; nutritional anaemia; iodine deficiency disorders; and noncommunicable diseases. The absence of representative nationwide nutritional surveys is an obstacle to assessing the extent of these problems. In the last few years, however, major successes have been achieved in nutrition: government approval of the revised National Nutrition Policy; legislation on universal salt iodization; and training of health personnel.

NUTRITIONAL PROBLEMS

Birth weight

About 10% of infants born in health facilities have a low birth weight (<2500 g) (data compiled from monthly statistics submitted by health facilities to the Health Information & Monitoring Branch, National Department of Health); 10.2% in 1999, 9.9% in 2000, 8.9% in 2001, and 9.7% in 2002. There are huge geographical differences, with infants in the highlands heavier than infants of lowland or coastal mothers. Milne Bay, Madang, East Sepik and Sandaun Provinces have each recorded more than 15% low birth weight rates.

Infant feeding

Recently Mgone 2 reported from two districts in Eastern Highlands Province (EHP) and Madang that nearly all children under four months of age were being exclusively breast-fed (EBF), at four months this had decreased to about 85% and at six months about 80% were still being exclusively breast-fed. Nearly 60% of children between six and nine months were receiving semi-solids or solids; in other words more than 40% of children were still being exclusively breast-fed at this age. Most children were still being breast-fed at about two years of age, which is the custom.

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<tr>
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<th>EHP</th>
<th>Madang</th>
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<tbody>
<tr>
<td>EBF under four-month children</td>
<td>100% (n=44)</td>
<td>97.4% (n=38)</td>
</tr>
<tr>
<td>EBF for four months in breast-feeding children</td>
<td>83.7%</td>
<td>86.5%</td>
</tr>
<tr>
<td>EBF for six months in breast-feeding children</td>
<td>75.0%</td>
<td>86.4%</td>
</tr>
<tr>
<td>Semi-solid or solid given to children six to nine months</td>
<td>61.8% (n=21 / 34)</td>
<td>53.3% (n=16 / 30)</td>
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<tr>
<td>Still breast-feeding at age 20-23 months</td>
<td>94.1% (n=16 / 17)</td>
<td>96.9% (n=31 / 32)</td>
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A 1995 study indicated that, although 100% of infants were being breast-fed at birth, only 72% of babies under four months of age were being exclusively breast-fed. The same survey revealed that, of 1822 mothers, 29% did not give colostrum to their babies because of various misconceptions. Complementary foods were being introduced as early as the

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2 Report on the household and community practices survey (HCPS) for the integrated management of childhood illness (IMCI) in Papua New Guinea, Papua New Guinea Institute of Medical Research, Goroka, 2002
first month, contrary to national policy and teaching. It must be noted, however, that urban mothers were overrepresented in this survey.

**Child growth**

Most malnutrition is seen in the second and third year of life. Marasmus is seen in infants. The 1982-1983 National Nutrition Survey found that 38% of children under five years of age were below the 80% median of weight-for-age. In 1998, a survey in eight districts worst affected by the drought caused by El Niño, showed that 45% of children under five were underweight (below -2SD of weight-for-age).

**Nutritional anaemia**

Anaemia in pregnancy is generally around 40%, but can be as high as 80%. In 1992-1993, 45% of mothers attending the antenatal clinic in the capital were classified as anaemic (Hb<10.0 g/dl). For infants, anaemia was among the top ten causes of admissions and deaths in health facilities. In 1996-1997, blood was taken from children under five years of age as part of a vitamin A study in three provinces. In two provinces, Madang and Sepik, both low-lying coastal areas, 83% (n=609) and 91% (n=270) of children were anaemic (Hb<11.0 g/dl). In the Western Highlands province 35% (n=141) of children were anaemic (Hb<11.0 g/dl).

**Iodine deficiency**

Goitre is found in the highlands. In 1997, 672 schoolchildren aged 8-10 years from two districts were examined for goitre. The total goitre rate was 4.6%; 0% in a control district and 13.7% in a remote mountainous district. Since 1995, legislation has stated that all salt for human consumption must be iodized.

**Vitamin A deficiency**

Vitamin A deficiency is not a major problem. In 1994, a hospital-based study, carried out by the United States Agency for International Development (USAID) Vitamin A Field Support Project (VITAL), found six cases of clinical vitamin A deficiency among 1027 children aged 6-72 months. Preliminary results of a vitamin A survey in coastal and highland provinces indicate no clinical signs of vitamin A deficiency. However, low prevalence rates of subclinical vitamin A deficiency were found in children under six years of age (serum retinol<0.7 µmol/l): 10% (n=609) in Madang Province; 15% (n=270) in Sepik Province; and 9.1% (n=141) in the Western Highlands Province. In the 1996-1998 survey, 0.9% of pre-school children had night-blindness.

Since 2002, vitamin A capsules have been added to the EPI, the first dose to be given together with the first measles vaccination at six months and the second dose about six months later. During the SIA in 2003 and 2004, vitamin A capsules are to be given to all children under five years.

**Obesity**

In a periurban village near the capital, 48% of the population were found to be obese, and in a settlement near the capital, 26%. Only incidental evidence is available on the prevalence of overnutrition. Communities in rural areas have relatively low levels of obesity, especially in the highlands. There is no consistent trend across age groups and, unlike other populations, men tend to be more obese than women. A 1991 diet and cardiovascular risk factors survey found different prevalence rates for obesity (BMI>30), with the highest prevalence (men 27%, women 38%) among the urban coastal population, 16% (men and women) among the rural coastal population, and 3.3% (men) and 2.2% (women) in the rural highlands.

Malnutrition in women is frequently due to an inadequate intake of energy and protein, and in rural women BMI decreases with age. It is common for women to eat only after the men or other members of the household have eaten.
POLICIES AND PROGRAMMES DIRECTED AT NUTRITION

The 1st National Nutrition Policy was endorsed in 1978, but was very difficult to implement. The interdepartmental Food and Nutrition Advisory Committee organized the 1992 National Workshop to reformulate the Food and Nutrition Policy. The workshop laid the foundation of the National Nutrition Policy, which was endorsed by the National Executive Council in 1995. In 2000 the Papua New Guinea National Food Security Policy was endorsed by National Executive Council and mainly implemented by the Department of Agriculture and Livestock.

National dietary guidelines are established in the nutrition manual *Nutrition for Papua New Guinea*, published by the Department of Health. "Six nutrition messages for good health", aimed especially at women and children, are promoted through use of a flipchart.

A National Coordinating Committee for Iodine Deficiency Disorders has been established, chaired by the Department of Health. A Plan of Action for the Control of Iodine Deficiency Disorders has been drafted. In 1995, the Pure Food Act was amended to state that all salt, imported or produced domestically, should be iodized.

Breast-feeding policies

A decline in breast-feeding in the 1970s was reversed by legislation in 1977 (the Baby Feed Supplies Control Act), which controlled the sale of feeding bottles and teats. This successful strategy served as a model for the International Code of Marketing of Breast-milk Substitutes. Despite the 1977 Act, sales of bottles have increased, many sold illegally without prescription. A 1995 study among predominantly urban women showed that the main reason for switching to bottle-feeding was employment. Implementation of the law needs to be strengthened.

There is a National Breast-feeding Policy. Mother support groups, e.g. Susu Mamas, are active and distribute information materials for mothers

Maternity leave is 12 weeks in both the public and private sectors, but is paid only in the public sector. The general orders for the Public Service grant mothers two breast-feeding breaks a day, but a 1995 study showed that only 27% of women used this right and 64% were unaware of it. Most workplaces do not have facilities for breast-feeding.

Monitoring and surveillance of nutritional status

There is no systematic monitoring of nutritional status, although there is a great need for up-to-date data. Information is routinely collected on birth weight, weight-for-age and nutritional anaemia. Weight-for-age data is collected on a monthly basis for children of 0-5 years and the data is compiled for the Health Information System.

Intervention programmes

Intervention programmes are conducted to improve nutrition in pregnancy, infant-feeding practices, child growth and nutritional anaemia. The Health Information and Monitoring Branch of the Department of Health provides annual reports to assist with monitoring and planning of intervention programmes.

Provincial Nutritionists provide nutrition education for the general public and for schoolchildren. In 2003, new nutrition education materials became available (flipcharts, posters).

*Prepared by Wila Saweri, Technical Advisor Nutrition, Family Health Unit, Department of Health, Papua New Guinea*