

diseases, particularly dietary deficiencies. Anthropometric indices included weight, height, upper arm circumference and triceps and subscapular skinfold; biochemical analyses included blood hematocrit, hemoglobin, and vitamin A, and urinary total nitrogen, urea, creatinine, calcium, and inorganic sulphur.

An important finding of both surveys is the differences among the areas surveyed in terms of the parameters measured. Thus it is recommended that nutrition programs be adapted to local conditions.

In general, the majority of households consist of one nuclear family; living conditions are modest, the level of education is low, livelihood depends to a great extent on agriculture and fishing, and diet consists mainly of locally produced rice and maize with a vegetable dish and a small amount of fish. Pregnant women and children under five years of age are particularly vulnerable to malnutrition, suggesting that priority should be given to Mother and Child Health Programs.

Vitamin A deficiencies and anemia are serious problems. Vitamin A deficiency is more prevalent in this study than in the areas of Sidoarjo, Blitar, Trenggalek, Lamongan, and Pamekasan surveyed in the previous year. It is recommended that the areas surveyed in this study be included in a vitamin A campaign in which bi-annual oral massive doses of vitamin A are administered. Iron deficiency, resulting from inadequate iron intake and increased iron requirements due to growth and infections, is the main cause of anemia. Endemic goiter is not a problem (1.4% of the total sample).

Anthropometric data show that 10-15% of the sample experience moderate-to-severe underweight (weight-for-height). Based on muscle and fat cross-sectional areas and dietary histories, caloric reserves are in greater deficit than protein reserves. "Stunting" accompanied by "wasting" starts as early as six months of age, yet only 3-5% of infants 0-5 months of age can be considered moderately or severely malnourished. Infants are breastfed for a prolonged period and additional food is introduced in the first months of life. This suggests that the prevalence of malnutrition is attributable to the lack of proper weaning foods.

Data are contained in 61 tables and 17 figures. Three appendices are included, one of which is the survey questionnaire.

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**834** Flint, D. M. et al. **The Effects of Institutionalisation on Nutritional Status of the Elderly in Australia.** 9 pp. Paper presented at the *Third European Nutrition Conference, Uppsala, Sweden, June 19-21, 1979.*

This paper, presented at the Third European Nutrition Conference, describes a study in which the nutritional status of a group of independent elderly people living in the Geelong region of Australia is compared with that of their institutionalised counterparts. Nutritional status was assessed by clinical examination, anthropometry, laboratory indices, dietary intake and socioeconomic parameters.

Results are reported for folate, ascorbic acid, protein, and zinc status. Mean serum folate levels, mean red cell folate values, plasma ascorbic acid concentra-