THE WORLDWIDE INCIDENCE OF LOW BIRTH-WEIGHT: AN UPDATE

An infant's birth-weight is the single most important determinant of its chances for survival and for healthy growth and development. Because birth-weight is conditioned by the health and nutritional status of the mother, however, the proportion of infants born with low birth-weight closely reflects the health status of the communities into which they are born.

Low birth-weight has been defined as a birth-weight of less than 2,500 g (up to and including 2,499 g). It can be caused either by premature delivery (short gestation), or by fetal growth retardation. In countries where the proportion of low birth-weight infants is small, most of them are pre-term. In countries where the proportion is high, the majority are suffering from fetal growth retardation.

The causes of fetal growth retardation are multiple and interrelated. Among them are low maternal food intake, hard physical work during pregnancy, and illnesses—especially ones involving infections. Short maternal stature, very young age, high parity, and close birth spacing are all associated factors.

It is clear from the multiplicity of causes that there is no universal solution to the low birth-weight problem. Interventions have to be cause-specific. Prenatal care, nutrition programs, health education about the needs of pregnant women, family planning, and measures aimed at improving the health and nutrition of young girls each have a role to play.

Recognizing the problem's gravity, the Member States of the World Health Organization decided in 1981 to use reduction in the proportion of infants born with low birth-weights as one of several indicators of progress toward the goal of "health for all by the year 2000." However, a number of practical difficulties are involved. In developed countries most infants are weighed at birth; in developing countries, on the other hand, it is usually only those born in institutions that are weighed. These infants constitute a small—usually privileged—minority. Indeed, a recent survey has shown that only about one-third of the births in the developing world take place in institutions, and in some countries the proportion is lower than one-fifth. Furthermore, even where records of birth-weights exist at the institutional level, they are rarely collated at the national level.

In order to obtain an approximate global picture of the availability of data and the extent of the low birth-weight problem, the WHO Division of Family Health in Geneva undertook a widespread search of all available sources of information in 1979. The results of this search were published in the *World Health Statistics Quarterly*,[1] where details of the methodology employed are described. At that time it was estimated that 21 million low birth-weight infants were born in 1979.

The data presented here constitute an update of those results. A new search, carried out at the end of 1983, yielded some new information on 90 countries, including 20 for which no previous information was available, bringing the total number of countries for which some—at times fragmentary—information is available to 112.

The new information was compared to the previous data and new estimates were made where the data seemed to warrant it. These new estimates are set out alongside the previous estimates in Table 1.[2] A certain degree of caution in the interpretation of the results is called for—partly because changes in individual country figures may reflect more precise estimates as well as real changes.

Taken as a whole, the data tend to indicate that there has been a slight fall in the incidence of low birth-weights. It is estimated that of the 127 million infants born in 1982, 16.0%—some 20 million—had low birth-weights. This consti-

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[1] *World Health Statistics Quarterly* 33(3):197-224, 1980.

[2] For reasons of space, details of the studies upon which the estimates are based are not given here but can be obtained upon request from the Division of Family Health, WHO, 1211 Geneva 27, Switzerland.

Table 1. Estimated low-weight births, by world regions and by subregions of the Americas, in 1979 and 1982.

Regions and subregions	Live births, 1982 (in thousands)	Low-weight births, 1982 (in thousands)	% infants with low birth-weights	
			1979	1982
Africa	23,148	3,233	15.0	14.0
Asia	74,855	14,750	20.3	19.7
Europe	6,857	445	7.7	6.5
Oceania	507	59	12.2	11.6
Union of Soviet Socialist Republics	5,111	409	8.0	8.0
Northern America	4,402	299	7.3	6.8
Latin America and the Caribbean	12,490	1,259	10.2	10.1
Middle America	*3,669*	*448*	*12*[a]	*12*
The Caribbean	*867*	*102*	*13*	*12*
Tropical South America	*7,033*	*647*	*9*	*9*
Temperate South America	*921*	*62*	*8*	*7*
The world	127,400	20,450	16.8	16.0
Developed countries	*18,200*	*1,250*	*7.4*	*6.9*
Developing countries	*109,200*	*19,200*	*18.4*	*17.6*

[a]Previous estimate for Middle America corrected.

tutes a fall in both relative and absolute terms when compared to the estimates for 1979—21 million low birth-weight infants making up an estimated 16.8% of the 122 million born that year. For developing countries only, the proportion has fallen from 18.4% to 17.6%.

Variations between and within geographic regions have not changed greatly, and these remain considerable. The incidence of low birth-weight by region ranges from 31.1% in Middle South Asia and 19.7% in Asia as a whole to 14.0% in Africa, 10.1% in Latin America, 6.8% in North America, and 6.5% in Europe.

In Africa, the estimated percentage of low birth-weight infants for 1982 (at 14.0%) is 1% lower than that for 1979. This fall is largely due to changes in Northern and Southern Africa, where more recent data have dramatically changed the estimates for a number of countries, including Egypt and Lesotho.

The overall proportion of low birth-weight infants born in Asia has declined slightly; but in Middle South Asia, where the problem is most acute, there is no evidence of change. Rates in this region remain between 20% and 50%.

In Europe as a whole, the incidence of low birth-weights has decreased from 7.7% to 6.5%, although this may be partly an artifact resulting from the availability of better information from Italy.

In Latin America, there is evidence of improvement in many countries, with rates in the south approaching those of developed countries. Data from countries whose governments publish national rates—Cuba, Panama, Uruguay, and Venezuela—all show a downward trend. Slight declines were also registered in the incidence of low birth-weights in Canada and the United States.

Source: The foregoing is a condensed version of the article "The incidence of low birth-weight: An update" appearing in the World Health Organization's *Weekly Epidemiological Record*, volume 59, number 27, pp. 205-211, 1984.