

Anemia in Children Under 5 Years of Age in Cameroon

A silent burden at the core of a rural-urban rivalry

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Investigating the prevalence of anemia among children in Cameroon

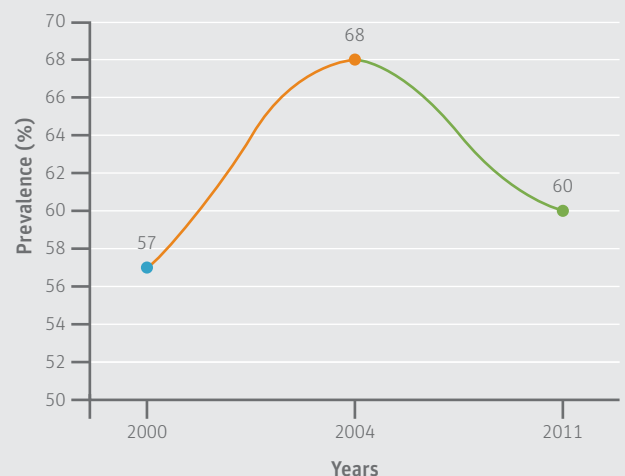
As in most developing countries, anemia is a significant public health concern in Cameroon. Its prevalence is well above the 40% threshold established by the World Health Organization (WHO) above which anemia is considered severe. More than three out of five children under 5 years of age are anemic, predominantly in rural areas (64.4%). The goal of our study is to add to the store of knowledge about the factors that explain the high prevalence of anemia among children in Cameroon.

“Anemia is a significant public health concern in Cameroon”

The history of anemia in Cameroon

A national survey of vitamin A deficiency and anemia was conducted in Cameroon in 2000. The survey indicated that 57% of children from 1 to 5 years of age and 53% of pregnant women were anemic. These findings led the government of Cameroon to

FIGURE 1: Trend of the prevalence of anemia among children from 6 to 59 months of age in Cameroon between 2000 and 2011.



Source: Jonas Tchassem Pinlap. Based on EDS 2004 and EDS-MICS 2011 data.

set a goal of achieving a one-third reduction in the prevalence of anemia among children and women of childbearing age by the year 2011.

The Demographic and Health Survey conducted in the year 2004 included anemia tests for children. This survey detected a prevalence of 68% among children from 6 to 59 months of age at the national level, with a somewhat higher prevalence in rural

areas (71.6%) than in urban areas (63.6%). More recently, in the year 2011 the results of the fourth Demographic and Health Survey indicated that three out of five children between 6 and 59 months of age are anemic, viz. 64.4% in rural areas and 57.2% in urban areas (Figure 1 and 2).

Accordingly, despite a downward trend between 2004 and 2011, the goal that had been set in the year 2000 was not achieved. Instead, the overall prevalence of anemia increased during the period from 2000 to 2011, despite numerous efforts to reduce it.

Study data and methods

Our study was based on a secondary analysis of cross-sectional data. The data consisted of the findings of the EDS-MICS¹ survey performed in Cameroon in 2011 on a sample base consisting of 4,566 children between 6 and 59 months of age who actually underwent hemoglobin testing during the survey. The prevalence of anemia based on hemoglobin levels was adjusted as a function of altitude, using the 1998 CDC² formulas.

Profile of anemic Cameroonian children between 6 and 59 months of age, by place of residence

As shown in Figure 2, more than three out of five Cameroonian children between 6 and 59 months of age have anemia. In terms of their place of residence, children in rural areas are more heavily affected than their counterparts in urban areas. This difference is statistically significant at the 5% threshold.

These children lived in the northern Sudano-Sahelian region, in households with at least three children under 5 years of age. They were male, between 6 and 23 months of age, emaciated, and unvaccinated. They had also been ill during the two-week period that preceded the study. Their mothers were uneducated, were unemployed or housewives, were anemic themselves, and were young when their children were born.

Principal risk factors for anemia in children under 5 years of age

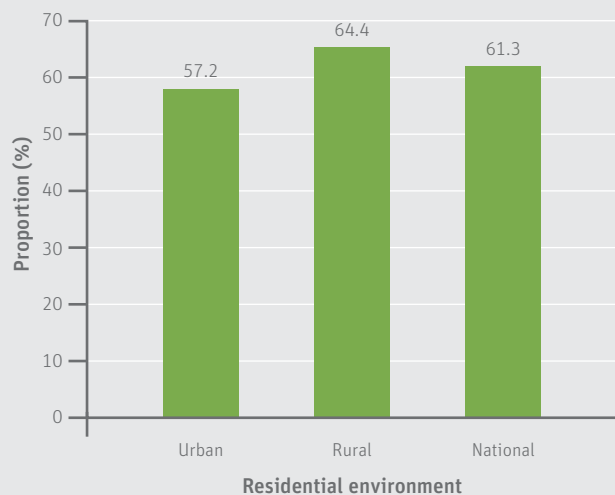
1) Age

Age is an important explanatory factor for anemia. Children under the age of 24 months living in cities and towns in Cameroon have a 2.6 times greater risk of being anemic than do children 24 months of age and older. In the countryside, this risk is 2.4 times higher.

2) Residential region

The residential region is a discriminant variable for pediatric anemia. In Cameroon it may be due, on the one hand, to the difference in the altitude of the residential regions and, on the other hand, to diet and to the presence of sanitation facilities.

FIGURE 2: Proportion of anemic children between 6 and 59 months of age, by residence



Source: Based on the EDS-MICS 2011 data for Cameroon.

3) Mother's anemic condition

Maternal anemia is an explanatory factor for pediatric anemia. It is also the third-ranked factor contributing toward an explanation of the overall model. The children of anemic mothers who live in rural areas have a 1.63 times greater risk of being anemic in comparison with the children of non-anemic mothers living in the same areas. The comparable risk is 1.49 in urban areas.

4) Mother's educational level

Educational level is the fourth-ranked explanatory factor for pediatric anemia in urban areas and the sixth-ranked explanatory factor in rural areas. Children in rural areas whose mothers have a secondary level or higher education have a 22% lower risk of developing anemia than do the children of less educated mothers.

5) Delayed growth

Delayed growth is ranked as the fifth leading factor in rural areas and the seventh leading factor in urban areas. Children with this type of malnutrition in rural areas have a 1.41 times greater risk of anemia than their counterparts. For the same group of individuals in urban areas, this risk is 1.34.

6) Illnesses associated with pediatric anemia

Although the illnesses experienced by the children during the two-week period preceding the survey are not an explanatory factor for anemia in urban areas, they do nevertheless rank fourth among the factors for the rural areas. These illnesses consist of diarrhea, cough, and fever. Consequently, those chil-

dren who did not experience these illnesses during the period in question have a 30% lower risk of being anemic in comparison with the children who were ill.

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“In Cameroon, anemia is an indicator of the deterioration in the state of health of the population at large”

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Conclusion

As in most Sub-Saharan African countries, in Cameroon anemia is an indicator of the deterioration of both the nutritional status and the state of health of the population at large, and particularly of children under 5 years of age. It is a major public health problem. It can be characterized as a “silent burden,” because it affects the growth and development of individuals as well as socioeconomic, familial, community, and national development, even though it is not as heavily publicized.

Accordingly, it is important to implement an anemia monitoring system in Cameroon, because such a system would not only help provide information about the evolution of the situation in the country and about the corresponding determining factors, but also serve as a resource for evaluating the intervention programs that have been implemented.

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References

01. MICS: Multiple Indicators Cluster Survey.
02. Centers for Disease Control and Prevention (CDC). The adjustment ranges from 0 g/L at an elevation of 1,000 meters to 45 g/L at or above an elevation of 4,500 meters.