



# Epidemiological Profile of Deaths in Children Aged 0 to 59 in the Pygmy Community. Case of the Manono and Ankoro Health District of Tanganyika Province in the Democratic Republic of Congo

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## Abstract

**Introduction:** Mortality and even morbidity are among the indicators of the efficiency of a health system. **Methodology:** We conducted a cross-sectional study on mortality among children aged 0 - 59 in the pygmy community with the aim of reducing mortality in this age group. This study covered two years, *i.e.* 2014 and 2015. **Results:** The overall hospital mortality rate is 39.9%; 2014 saw many deaths (77.9%) compared to 2015 (22.1%); Newborns whose age is between 0 and 28 were more concerned by death donations 47.7%, followed by those aged between 1 and 11 months (30.2%) and finally those whose age is included between 12 and 59 months (22.1%). **Conclusion:** Reducing mortality among children aged 0 - 59 is a major asset for nation building.

## Subject Areas

Epidemiology

## Keywords

Epidemiological Profile, Deaths, Children, 0 to 59, Pygmies, Manono, Ankoro

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## 1. Introduction

For a long time, mortality and birth rates have served as a barometer for the future of populations. More recently, research and analysis of the most common causes of death have brought together demography, epidemiology and medicine [1].

Of the 9.7 million children who die each year, 3.1 million are in South Asia and 4.8 million in sub-Saharan Africa. In the developing world, infant mortality is much higher in rural areas and among the poorest households. In developed countries, there are only 6 deaths per 1000 births [2].

The number of newborn deaths globally remains alarming, especially in the poorest countries, says UNICEF in a new report on neonatal mortality released today. The report lists the Democratic Republic of Congo (DRC) among countries with very high neonatal mortality rates. In the DRC, one in 35 newborns die before the age of one month, or 96,000 newborns per year. In absolute terms, the DRC is among the four countries in the world with the highest number of neonatal deaths. Although the DRC has made considerable progress in reducing the infant and child mortality rate, which fell from 148 per thousand live births in 2007 to 104 per thousand in 2017, the number of new born deaths remains high. “The situation is compounded, among other things, by conflicts and crises that prevent pregnant women from receiving adequate health care during child-birth,” said Dr Tajudeen Oyewale, UNICEF Representative in the DRC [3].

## 2. Methodology

Our study is intended to be cross-sectional on the mortality of children aged 0 to 59 in pygmy children in the Manono health zone as well as that of Ankoro, specifically in the Kyofwe, Lwakato and Kanteba health areas.

The study was carried out in the various health structures located in the Manono health zones and Ankoro health zones.

Our sampling is exhaustive, and its size is 2700 children who have consulted one of the health facilities in the Manono Health Zone or that of Ankoro with 995 cases of death. The study covered a period of two years, from 01/01/2014 to 12/31/2015. The data was collected based on a file from patient registers, encoded in Excel and exported to SPSS 23 for analysis.

## 3. Results

**Table 1.** Distribution of deceased children in relation to the various pathologies.

Recurrent pathologies leading to death	Total patients seen in consultation	Total deceased patients
Malaria anemia	1001	300 (30.2%)
Malnutrition	700	205 (21%)
Protein-Energetic	435	150 (15.1%)
Gastroenteritis	205	105 (10.6%)
Meningitis	107	100 (10.1%)

**Continued**

Rougeole	130	90 (9%)
Other pathologies	122	45 (5%)
<b>Total</b>	<b>2700</b>	<b>995</b>

**Table 1** shows that out of a total of 2700 children who were seen for different pathologies, 995 (36.9%) died and 300 died from malaria anemia (30.2%).

**Table 2.** Distribution of deceased children according to the years of occurrence.

<b>Year</b>	<b>Frequency</b>	<b>Percentage</b>
2014	775	77.9
2015	220	22.1
<b>Total</b>	<b>995</b>	<b>100</b>

2014 saw many deaths (77.9%) compared to 2015 (22.1%) (**Table 2**).

**Table 3.** Distribution of deceased children by age.

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
0 - 28 days	475	47.7
1 - 11 month	300	30.2
12 - 59 month	220	22.1
<b>Total</b>	<b>995</b>	<b>100</b>

**Table 3** shows us that it is more the newborns who died with (47.7%), followed by those with an age between 1 and 11 months (30.2%) and finally those whose age is included, between 12 and (22.1%).

**Table 4.** Distribution of deceased children by sex.

<b>Sex</b>	<b>Frequency</b>	<b>Percentage</b>
Male	700	70.4
Female	295	29.6
<b>Total</b>	<b>995</b>	<b>100</b>

The male children recorded more cases of death than those of the female sex with respectively 70.4% for the male sex versus 29.6% for the female sex (**Table 4**).

**Table 5.** Distribution of deceased children according to season.

<b>Saison</b>	<b>Frequency</b>	<b>Percentage</b>
Rainy season	750	75.4
Dry season	245	24.6
<b>Total</b>	<b>995</b>	<b>100</b>

The rainy season had more cases of death, *i.e.* 750 dead children (75%) against 245 cases, or 24.6% for the dry season (**Table 5**).

**Table 6.** Distribution of deceased children according to the patient's condition upon admission to different health facilities.

Patient's condition on admission	Effectif	Pourcentage
Moderate	185	18.6
Critical	810	81.4
<b>Total</b>	<b>995</b>	<b>100</b>

Regarding the patient's condition on admission, **Table 6** indicates that the majority of children received in different health structures were already in critical condition, *i.e.* 810 cases (81.4%) against 185 (18.6%) which were received in moderate condition.

**Table 7.** Distribution of deceased children according to the parents' profession.

Socio-Professional Category	Frequency	Percentage
Cultivators	280	28.2
Artisanal diggers	20	3
No occupation	695	69.8
<b>Total</b>	<b>995</b>	<b>100</b>

In 69.8% of cases the parents of the deceased children were unemployed against 3%, parents who were artisanal miners (**Table 7**).

#### 4. Discussion

The proportion of deaths among children seen in consultation was 39.9% while CHUEM found 1.2% [4].

Regarding death, we observed that malaria anaemia recorded more cases, or 300 deaths out of a total of 995 or 36.9% (**Table 1**). In Togo, the causes of death were malaria (18.6%) and neonatal infections (28.5%) [5]. For Diallo, it is malnutrition which is the main cause of death in children aged 0 to 5 years old [1].

Our study covered two years, the year 2014 and the year 2015. We observed more deaths during the year 2014 (77.9%) compared to the year 2015 (22.1%).

Regarding the age of deceased children, we observed more cases of death in children whose age was between 0 and 28 days with a proportion of 47.7% followed by children whose age is between 1 and 11 months (30.2%) while the age between 12 and 59 months had the lowest proportion (30.2%) as shown in table3. CHUEM found that the ages of children between 12 - 23 were the most affected [4].

There were more cases of death among children of the sex than those of the female sex with respectively 70.4% for the male sex versus 29.6% for the female sex (**Table 4**). Our results are like those found by other authors [4] [5] [6].

However, other authors have found that girls die much more than boys, girls die much more than boys [1] [7].

The rainy season had more cases of death, *i.e.* 750 dead children (75%) against 245 cases, or 24.6% for the dry season (**Table 5**).

Regarding the patient's condition on admission, **Table 6** indicates that the majority of children received in different health structures were already in critical condition, *i.e.* 810 cases (81.4%) against 185 (18.6%) which were received in moderate condition.

Regarding the occupation of the parents of deceased children, 69.8% were unemployed against 3%, parents who were artisanal miners while 28.2% were farmers. Some authors have found that the parents of deceased children were laborers [1].

## 5. Conclusions

We conducted a descriptive cross-sectional study on the mortality of children aged 0 to 59 in the Manono Health Zone and Ankoro Health Zone. This study concerned the children of the pygmy community.

In our series the prevalence of deaths is 36.9%; the male sex was the most affected (70.4%); there were more cases of death in the rainy season (75.4%); most children arrived at the health facility in critical condition (81.4%); in 69.8% of cases the parents of deceased children were unemployed.

Children are the future of tomorrow. It is important that leaders are actively involved in the health system to reduce morbidity as well as mortality in children aged 0 to 59 years.

## Conflicts of Interest

The authors declare no conflicts of interest.

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