



**REPUBLIC OF MOZAMBIQUE
MINISTRY OF HEALTH
Committee of Experts on
Immunization (CoPI)**

First Meeting

Maputo, 26 to 28 April 2011.

Recommendation R002/01/2011

Recommendation on the Calculation of the EPI target groups

Preamble

- A. The CoPI noted with great concern that the calculation of the EPI target groups is made by methods that are inappropriate and incorrect, according to guidelines of WHO for nearly 20 years old.
- B. In particular, the CoPI found that the calculation of the target group at birth (BCG and Polio Zero) is made without taking into account the fact that the birth rate in Mozambique has been steadily declining and there are huge differences in birth rates between provinces.
- C. Regarding the calculation of the target groups of other vaccines, including the first and third doses of vaccine Penta 1 + Polio 1, Penta 3 + Polio 3 and measles vaccine, we continue to use the same data for target group at birth, without taking into account the variability between provinces and the fact that children are dying gradually over the first year of life.
- D. The CoPI also found that the National Institute of Statistics (INE) is able to provide quite accurately the number of births expected in the country, by province and district for each year between 2012 and 2019, thus avoiding doubtful calculations done by poorly trained staff.

- E. The CoPI was informed that although the INE does not have accurate data on the number of surviving children at the 6th and 14th weeks and at 9 months, estimates were made with relevant approximation to reality and were accepted by the INE, regarding the number of children survivors at the ages recommended for vaccination in the EPI. The criteria used for these estimates at national level can be similarly used to identical calculations at provincial and district levels.**
- F. The CoPI was also informed of the estimates of the decline in infant mortality since the last Population Sensus in 2007 as a result of the introduction of Hib vaccine, which is documented by studies before and after introduction of the vaccine. It can now be estimated with a relative degree of reliability that the infant mortality rate in 2011 is around 88/1.000. By applying the same criteria it is possible to calculate the estimated infant mortality rate for each province. The increase in coverage by Penta 3 vaccine will accentuate this decline in infant mortality.**
- G. The COPI also noted that the calculation of the target groups of the tetanus vaccine for pregnant women and women of childbearing age is also affected by the same mistakes and inaccuracies.**
- H. Finally, COPI has also noted that the National Statistics Institute (INE) has made surveys and censuses of high quality, award-winning at the international level, but while the EPI uses demographic data provided by this institution, collaboration with INE is still insufficient since all the possibilities that this institution offers have not been exploited.**
- I. Finally, the CoPI found that EPI Manual Chapter for the calculation of target groups, is outdated, unclear, not didactic enough and contains contradictions. Lastly, it refers responsibility to the local level (Health Center) which does not have the capacity to do these calculations, and is silent with regard to the actual problem of how to distribute the various target groups by the various health centers in the District. For all these reasons, this chapter requires urgent revision.**
- J. The CoPI considered that the real problem for the calculation of target groups is how to distribute the targets for each of the District Health Centers, since the health areas does not correspond to the administrative division and the INE does not publish projections of**

population units below the level of district (administrative posts and localities).

- K. During its deliberations the CoPI noted that there is much confusion about the vaccine schedule and that there is a serious contradiction between the provisions in the Manual of EPI, those indicated in the Child Health Card and the practice on the ground.

Operative paragraphs

Under these circumstances CoPI recommends that:

1. The calculation of target groups for the Provinces and Districts is done at central level, in collaboration with the INE and that these data are sent to local use, thus avoiding distributing calculation rules, sometimes difficult to use by unskilled staff working at health centers and district health structures;
2. For the targets of vaccines administered at birth (BCG, Polio Zero and possibly in future Hepatitis B Zero), the data provided by INE should be used for the whole country, by Province and District, for each of the years 2012 to 2019, without any further calculation;
3. To calculate the target groups of vaccines in the first and third doses of vaccines Penta 1 + Polio 1, Penta 3 + Polio 3 and measles vaccine account should be taken of the curve of age-specific mortality during the first year of life, considering that the target group for Vaccine Penta 1 + Polio 1 should be of 95.7% of the number of live births, the Vaccine Penta 3 + Polio 3 should be of 94.7% of the number of live births and that, finally, the target group for anti-measles vaccine should be 92.1% of the number of live births;
4. To calculate the target group of tetanus vaccine in pregnant women, the data of births provided by the INE should be used, but correction factors should be introduced according to the rate of stillbirth and twinning, and to this effect the calculation of these rates by the end of November 2011 should be made, using data from the Health Information System (SIS) or possibly from some studies to be conducted in well-functioning health facilities in each province;

5. To calculate the target group of tetanus vaccine in women of childbearing age, the data contained in population projections published by the INE are to be used, for the whole country, for each province and each district;
6. The EPI, in collaboration with the Health Information System (SIS) and the Department of Planning and Cooperation (DPC), should improve their collaborative relationships with National Institute of Statistics;
7. Chapter of the EPI Manual on the calculation of target groups should be thoroughly reviewed by the end of September 2011;
8. The methodology for calculating of the target groups here recommended should already be used, for all vaccines, in 2012;
9. At the national level it should not be mentioned any more DTP 1, DTP 2 or DTP 3, but Penta 1, Penta 2 and Penta 3.

Finally, CoPI has decided to bring the theme of "vaccination schedule" into the agenda of its next meeting and, up to then, a study should be conducted on this matter, with extensive consultation of all parties involved, without ever neglecting the precious collaboration of pediatricians.

Monitoring Indicators

- ▶ That the calculation of target groups for all provinces and all districts by 2012, has already been done at the central level, in collaboration with the INE,
- ▶ That the calculation of target groups for all provinces and all districts by 2012, has already been done using the calculation methodology recommended here,
- ▶ That by the end of November 2011, has been made a study on the rate of stillbirth and twin births, from data in the SIS or possibly from some studies to be conducted in better functioning health facilities in each province,
- ▶ Chapter EPI Manual for the calculation of target groups has been completely revised by the end of September 2011,

- ▶ That the topic of "vaccination schedule" is placed on the agenda for next meeting of the CoPI and that by September 15, 2011, the study on this matter has already been carried out, with extensive consultation of all parties involved, without ever neglecting the valuable collaboration of pediatricians.

Maputo, April 28, 2011