**About protocols for registration of birth defects, preterm and premature births and late miscarriages in areas of conflict-post conflict and after changes of the environment.**

Mere assessment of the frequency of birth defects is not enough to program for public health in countries where traumatic events have occurred recently, and does not allow rapidly to understand the trend in time of birth defect presentation and their eventual correlation to the novel or extraordinary events in the environment.

The protocol to use in these circumstances needs to be “sculptured“ on the specific location, while including, also all the standard international questions, as by International Clearing House of Birth Defects and classification according to ICD10.

We developed and used in Gaza in 2011, a specific protocol for the study that allows to understand also **the trend of prevalence of birth defects from the past and to establish correlation with major environmental changes and identify the pattern of presentation of pre-existing genetic defects, versus novel events**.

The questions that should present in any protocol are those directed to obtain the following information, which is not usually present in  the standard protocols:

1.For all parental couples: Pedigree of all the progeny of the couple (with dates of birth and eventual disease), and record of late miscarriages.

Only for the parents of a child with birth defect child or with previous birth defect child: collection of data on the eventual presence of birth defects in collateral kin.

This information allows to identify familiar disease and eventual is useful for *diagnostic and molecular* *screening of eventual mutations in the family*.

Knowledge about familiarity of the defect in turn informs for eventual *prenatal and postnatal counseling*.

2- For all parental couples: Historical residence of the parents, and history of exposure to the most relevant local environmental risk factors and their date of first implementation (from the introduction of pesticides and fertilizers to the exposure to war-related events). This allows eventually to establish the correlation of risk factors in the environment and birth defect, which can be used in designing *public health interventions and developing insights in the mechanisms of induction of birth defects.*

The questionnaire here below is slightly modified from that utilized in a pilot study at al Shifa Hospital maternity in Gaza, Palestine in 2011, to include questions about pesticide/fertilizers/ insecticides usage.

The other change introduced is that in the previous protocol we had focused our question on exposure to war  at the time of Cast lead. From the results obtained in our pilot investigation, we learned that  focusing only on Cast lead events had been  a "prejudice from our side". So here people are requested to recall the exposure to attacks "since 2001".

This questionnaire is focused almost exclusively on children health and aims to reconstruct the genetic background for congenital diseases.

It is designed to obtain exposures and the possibility to draw correlation with environmental known risk factors.

From this questionnaire, with an appropriate handling, also perinatal child mortality  and morbidity rates can be obtained  and other demographic data, according to the organization of the data and the focus of the investigator handling them.

In our experience the protocol below, does not request more than 5-7 minutes to obtain the information, once the personnel is trained.