

Comment to "Developing an evaluation framework for Hepatitis B immunization programs in developing countries: A case study with Cuba"

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This number of the Journal has published the article entitled - *Developing an Evaluation Framework for Hepatitis B Immunization Programs in Developing Countries. A case study with Cuba.*

A comprehensive analysis of the Cuban hepatitis B vaccination program is presented here by researchers from The University of British Columbia.

Different program components were analyzed and compared to WHO standards, starting from information in public databases or given by Cuban health professionals or Officials from the Ministry of Health.

A field marker survey was also proposed to evaluate the impact of the vaccination program and make certain analyses from the available data as well as different assumptions. The authors also pointed out some limitations in the study.

The purpose of my comment, more than a discussion on this article, is to give updated data related with the information given there. More detailed information can be found in the papers of Delgado G *et al.* [1, 2].

As a result of the combined strategies used in the National Immunization Program, 11 244 904 doses have been applied in the country from 1992 year 2003.

More than 3 million people have been vaccinated, representing 33% of the Cuban population.

This year the whole Cuban population under 25 years of age as well as the main risk groups will be covered by the vaccination program. In some areas of the country, like Pinar del Río province and Isla de la Juventud, the whole population of up to 30 and 60 years of age, respectively, has been vaccinated.

The incidence of acute hepatitis B, one of the surveillance indicators for the assessment of the program, has shown a reduction in the annual number of cases not only in children under 15 years of age, the main target of the vaccination program, but also in the whole Cuban population.

Table 1 shows the numbers of cases of acute hepatitis B by age group. The data include the year 1992 (when the National Vaccination Program started) and the years 2001 and 2003 (9 and 11 years after the introduction of the hepatitis B vaccine in the immunization program, respectively). In both cases, the percentages of reduction in the incidence of acute hepatitis B compared to 1992 are shown.

Since 1999, no cases of acute hepatitis B in children under 5 years old have been reported. On the other hand, in 2003 a 99.7% reduction in acute hepatitis B cases in children under 15 years of age was achieved. In the general population less than 100 cases were reported. This figure represents 22 times less cases compared to the those reported in 1992, when the vaccination program started.

Finally, I would like to mention some results regarding the impact of the vaccination program in the reduction of the perinatal transmission of hepatitis B. This aspect is one of the short term objectives of the Cuban Vaccination Program.

In our country the Ministry of Health has established a screening program for hepatitis B of all pregnant women since 1987. Children born to hepatitis B infected mothers receive a differential immunization schedule of four doses (the first one within 24 hours after delivery, the second and third doses at one and two months, respectively, and a booster dose applied at the age of 12 months).

The follow up for these children includes blood samples at 7 and 18 months of age, to evaluate hepatitis B serum markers.

The efficacy of hepatitis B vaccination in a cohort of children of infected mothers is shown in table 2. It summarizes the data from 1992 to 2001. Blood samples were taken at 7 months of age.

The effectiveness of the vaccines ranges from 96 to 99%, even when administered alone, without the concomitant use of hyper-immune gamma globulin.

1. Delgado G, Galindo MA, Rodríguez L, Díaz M. MEDICC Review, Volume V, No. 1, 2003. <http://www.mediccc.org>.

2. Delgado G, Galindo MA, Rodríguez L, Díaz M. MEDICC Review, Volume VI, No. 1, 2004. <http://www.mediccc.org>.

Table 1.

Age group (in years)	Year 1992		Year 2001		Year 2003	
	Number of cases	% reduction	Number of cases	% reduction	Number of cases	% reduction
< 1 year	4	100	0	100	0	100
1-4	62	100	0	100	0	100
5-9	135	100	0	100	0	100
10-14	148	98	3	98	1	99.3
Subtotal	349	99.1	3	99.1	1	99.7
15-24	652	94.5	36	94.5	9	98.6
25-59	1 100	83.5	182	83.5	78	92.9
60-64	39	77	9	77	2	95.0
65 and more	51	72.6	14	72.6	7	86.3
TOTAL	2 194	88.9	244	88.9	97	95.6

Table 2.

Results	Hepatitis B surface antigen (HBsAg)	%
Negatives	395	94.5
Positives	23	5.5
Total	418	100

The use of Heberbiovac HB under proper immunization strategies carried out by the Ministry of Health since 1992 has shown an impact in the reduction of acute hepatitis B as well as in its perinatal transmission.

Other studies will be designed in the near future to evaluate not only the prevalence of hepatitis B surface antibodies in the vaccinated population but also to measure the carrier rates in different population groups.