3.5.1 Evolution of the weekly risk in one month

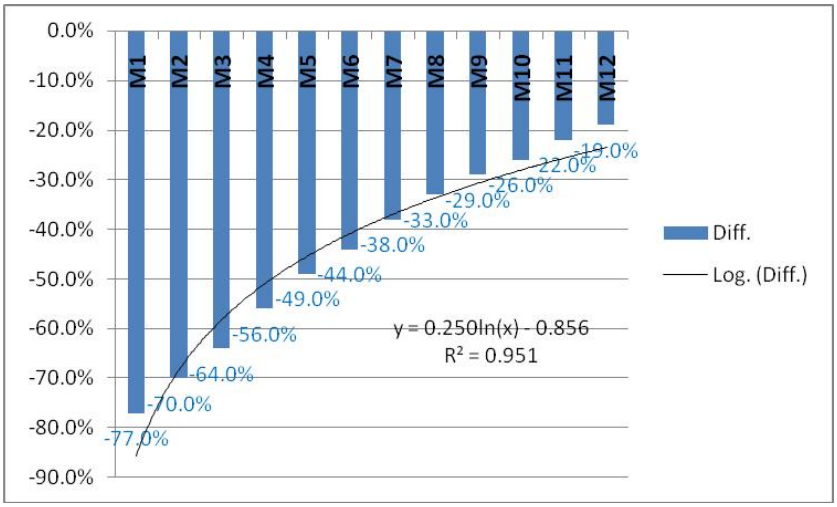
Before vector control the risks quickly increased with time, with 3% in one day; 17% in one week; > 40% in three weeks and > 50% in one month (Table 5a). After vector control the risks dropped respectively to < 1% in one day 3%; in one week; < 10% in three weeks and 12% in one month meaning an 80% reduction during one month.

Table 5a Evolution of the weekly risks, in one month, of getting an infective bite before and after vector control, with the difference of risks induced

	Before	After	Diff
D1	2.7	0.5	-83.1%
D7	17.2	3.1	-81.8%
D14	31.5	6.2	-80.4%
D21	43.3	9.1	-79.0%
D28	53.1	11.9	-77.5%

3.5.2 Evolution of the monthly risk in one year

Without vector control the risk of being infected was > 50% in one month; reached > 90% in three months and >99% in six months. With vector control implementation, the risks were reduced by 77% in one month; >60% in three months and > 40% in six months. Even in one year, vector control reduced transmission by 20% (Table 5b). In one year, the difference of risk remained spectacular after implementation of vector control (Graph. 5c). The risks increased as logarithmic function of time (Graph 5c) and, correlatively, the reduction of risks induced by vector control decreased as logarithmic function of time (Graph 6).



Graph 6 Evolution of the reduction of risks conferred by vector control according to the duration of stay. (M= number of months)

With vector control 80 to 20 % of new inoculations could be averted. The 20% reduction observed even after one year of exposure in noteworthy at community level and for programming vector control operations.

3.6 Synthesis

Gathering the level increasing risks with time and reduction of risks, conferred by each one of the four methods of vector control (Table 6) showed that, excepted LLIN, the level of protection was about 70% the first month with an average of 77%; a level which appeared well in line with the 80% protection usually considered for vector control. Then the protection decreased with time but could still be around 30% in one year with insecticide treated plastic sheeting model ZeroVector® alone. With implementation of vector control the average reduction was about 20% which is greatly appreciable at community level.