

3.4.1 Evolution of the weekly risk in one month

Before house spraying the risks quickly increased with time, with 4% in one day; 23% in one week; > 50% in three weeks and 65% in one month. (Graph 4b). With vector control these risks decreased < 1% in one day; 5% in one week; 13% in three weeks and 17% in one month meaning a 75%-80% reduction of risks in one month (Table 4a).

Table 4a Evolution of the weekly risks, in one month, of getting an infective bite before, and after, inside house spraying followed by ITPS installation, with the difference of risks induced

IRS ITPS	Before	After	Diff.
D1	3.6	0.7	-81.3%
D7	22.9	4.7	-79.5%
D14	40.5	9.2	-77.4%
D21	54.1	13.4	-75.2%
D28	64.6	17.5	-72.9%

3.4.2 Evolution of the monthly risk in one year

Before house spraying the risks were very high with nearly 70% in one month; nearly 90 in two months; 99% in four months (Table 4b). The risks decreased respectively < 20% in one month; 34% in two months; 56% in four months but reached 90% the 11th-12th month. The reduction of risks came from 72% to 10% in one year, reaching 50% in three months; 30% in six months; still 20% in eight months and almost 10% in one year (Graph 4c).

Table 4b Evolution of the monthly risks of receiving an infective bite of a main vector of malaria in a house before and after house spraying followed by ITPS installation, and the difference of risks

IRS then ITPS	Before	After	Diff.
M1	67.2	18.6	-72.3%
M2	89.2	33.7	-62.2%
M3	96.5	46.1	-52.2%
M4	98.8	56.1	-43.2%
M5	99.6	64.3	-35.5%
M6	99.8	70.9	-29.0%
M7	99.9	76.3	-23.6%
M8	99.9	80.7	-19.3%
M9	100	84.3	-15.7%
M10	100	87.2	-12.8%
M11	100	89.6	-10.4%
M12	100	91.6	-8.5%

3.5 Average evolution of risks before and after vector control

Following vector control the average number of main vectors per trap decreased from 0.58 to 0.17 and the sporozoite index dropped from 4.53% to 2.59%. With these data in the Birley's formula it is possible to calculate the risks of receiving an infective bite in sleeping one day, one week, one month (Graph 5a and 5b), one year (Graph 5c) in house before, and after, IRS then ITPS.

Before vector control the risk of being infected reached 50% the 26th day; in one month the risk was 55.5% without vector control and 12.7 after vector control meaning a 77% reduction of risks conferred by vector control the first month.