

# Reduced vaccination rate against Japanese Encephalitis after introduction of Ixiaro®

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At Oslo Travel Clinic, the largest vaccination clinic in Norway, the annual number of immunizations against Japanese Encephalitis was significantly reduced after the introduction of Ixiaro®. We assume that this is due to the higher cost.



## Background

Formerly available vaccines against Japanese Encephalitis (JE) were associated with serious, but rare, adverse reactions. Ixiaro®, a new formalin-inactivated, purified whole cell vaccine, was authorized in the European Union (EU) 31 March 2009 and granted Marketing Authorisation in Norway 27 July 2009. Ixiaro® rapidly replaced other vaccines against JE and is currently the only available JE-vaccine in Norway. However, the cost of Ixiaro® is three times the cost of the discontinued vaccines.

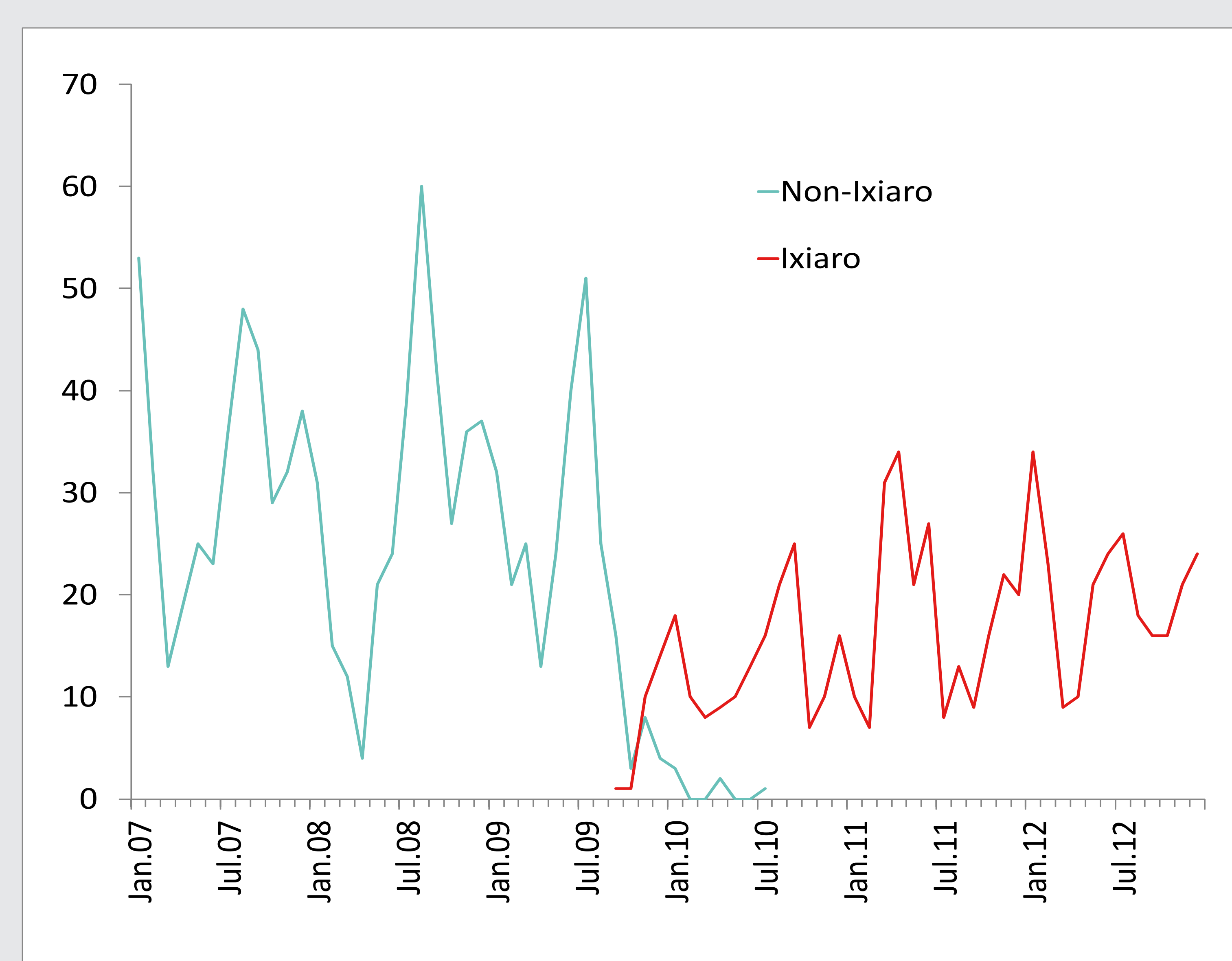
## Objective

The aim of the present study was to examine the vaccination rate against JE before and after the introduction of Ixiaro® at Oslo Travel Clinic in September 2009.

## Method

A retrospective study was carried out at Oslo Travel Clinic, the largest vaccination clinic in Norway, performing approximately 12,000 consultations annually. Monthly number of immunizations against JE and monthly number of consultations was recorded from 2007 to 2012. There were no changes in national vaccination recommendations during the study period. At our clinic, both Green Cross JE-vaccine and Je-Vax® were administered as two doses at day 0 and 14–21.<sup>1-2</sup> A third dose was recommended after >12 months, if needed.

Based on estimated number of patients receiving the respective vaccines each year, we applied two-sided t-test assuming unequal variances using the statistical software package R. Similar analysis based on the proportion of total number of consultations was also performed.



Monthly number of immunizations against Japanese Encephalitis from 2007 to 2012

## Results

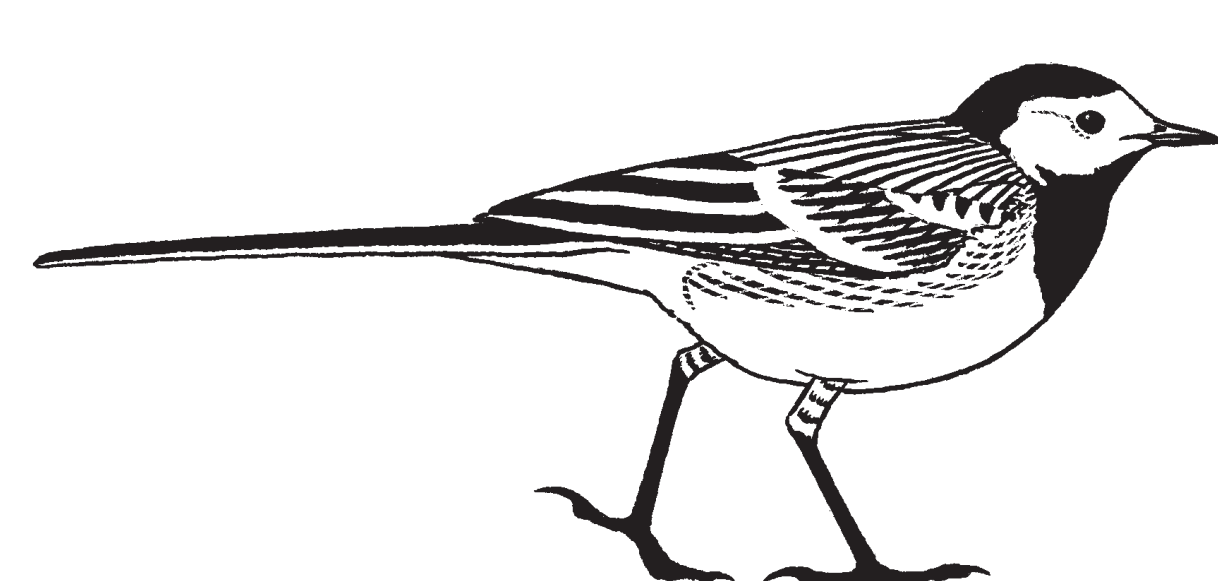
The mean annual number of patients vaccinated against JE was reduced from 173 to 104 (–40.1%) after the introduction of Ixiaro®. The reduction was statistically significant with  $p=0.018$  and 95% confidence interval (20, 119).

A similar result was obtained when the vaccination rate was calculated as estimated number of patients receiving JE-immunizations/total number of consultations ( $p=0.012$ ).

## References

<sup>1</sup> Gambel JM, DeFraités R, Hoke C, et al. Japanese encephalitis vaccine: persistence of antibody up to 3 years after a three-dose primary series. *J Infect Dis* 1995;171:1074.

<sup>2</sup> Sanchez JL, Hoke CH, McCowan J, et al. Further experience with Japanese encephalitis vaccine. *Lancet* 1990;335:972-3.



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