

# Evidence Update

Malaria Series

July 2004

## Do insecticide-treated bed nets reduce deaths in children?

Insecticide-treated bed nets reduce mortality and malaria illness episodes in children.

### Inclusion criteria

#### Studies:

Individual and cluster randomized controlled trials.

#### Participants:

Children and adults living in rural and urban malarial areas.

#### Intervention:

Bed nets or curtains treated with synthetic pyrethroid insecticide.

#### Outcomes:

All cause and malaria-specific child mortality; severe malaria; uncomplicated clinical episodes; parasite prevalence; high parasitaemia; anaemia; splenomegaly; anthropometric measures.

### Results

- Fourteen cluster randomized and 8 individually randomized controlled trials were included; 16 were adequately concealed.
- Five trials showed that insecticide-treated bed nets compared to no nets reduce deaths (relative rate 0.83; 95% CI 0.76 to 0.90). Treated nets compared to plain nets were also protective (relative rate 0.77; 95% CI 0.63 to 0.95).
- About 5.5 lives (95% CI 3.39 to 7.67) can be saved each year for every 1000 children with treated nets.
- In areas with stable malaria, treated nets reduced uncomplicated malarial episodes by 50% compared to no nets, and 39% compared to untreated nets.
- In areas of stable malaria, treated nets reduce severe malaria, parasite prevalence, high parasitaemia, splenomegaly, and increase average haemoglobin.

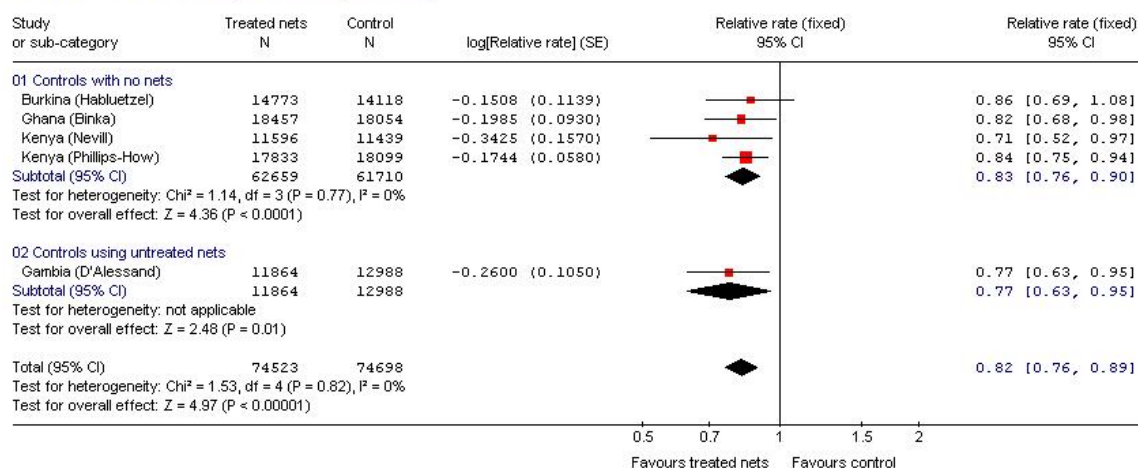


**DFID** Department for  
International  
Development

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Review: Insecticide-treated bed nets and curtains for preventing malaria  
 Comparison: 01 Insecticide-treated nets versus all controls  
 Outcome: 01 Child mortality from all causes (relative rate)



## Reviewer's conclusions

### Implications for practice:

Insecticide-treated bed nets are effective in reducing childhood mortality and morbidity from malaria. Widespread access to treated nets is currently being advocated by Roll Back Malaria, but universal implementation will require major financial, technical, and operational inputs.

### Implications for research:

The beneficial impact of treated nets has been largely demonstrated under trial conditions; given the consistency of the results for different outcomes and different areas of the world it is unlikely that more trial data are required.