# Can the presence of insecticide treated materials in the household control dengue vectors?

Submission date	Recruitment status	[_] Prospectivel	
17/03/2010	No longer recruiting	[_] Protocol	
<b>Registration date</b> 18/03/2010	<b>Overall study status</b> Completed	[_] Statistical an	
		[X] Results	
Last Edited 19/02/2020	<b>Condition category</b> Infections and Infestations	[_] Individual pa	

# Plain English summary of protocol

Not provided at time of registration

# **Contact information**

Type(s) Scientific

Contact name Dr Philip McCall

**Contact details** Liverpool School of Tropical Medicine Liverpool United Kingdom L3 5QA

# Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers 075930

# Study information

y registered

nalysis plan

rticipant data

### Scientific Title

A cluster randomised controlled trial of household-based insecticide treated window curtains and water jar covers for control of the dengue vector Aedes aegypti in the community

#### Acronym

**DENCO Venezuela** 

### **Study objectives**

We investigated whether window curtains and covers for domestic water storage containers, both made from long-lasting insecticide-treated netting and deployed either separately or in combination, could reduce populations of Aedes aegypti, the mosquito vector of dengue, to levels that could reduce dengue virus transmission in treated communities.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

 Research Ethics Committee of the Liverpool School of Tropical Medicine approved on the 2nd February 2006 (ref: 06/12)
 Bio-ethical committee of the Jose Witremundo Torrealba Research Institute, Trujillo, Venezuela, approved on the 18th June 2006

### Study design

Cluster-randomised controlled trial

**Primary study design** Interventional

**Secondary study design** Randomised controlled trial

Study setting(s) Other

**Study type(s)** Prevention

#### Participant information sheet

Not available in web format, please use the contact details below to request a patient information sheet

### Health condition(s) or problem(s) studied

Dengue (including Dengue Haemorrhagic Fever [DHF] and Dengue Shock Syndrome [DSS])

#### Interventions

Curtains made from deltamethrin-coated polyester netting (Long Lasting Impregnated netting; PermaNet® Vestergaard-Frandsen, Lausanne, Switzerland), hung in all outer windows regardless of the presence or absence of other window coverings (World Health Organization Pesticide Evaluation Scheme [WHOPES], approved material for indoor use). Insecticide-treated water storage container covers are provided as ready-to-use products (a prepackaged standard size with elasticated border, to close round the water container rim). Treated households provided with enough covers for all large household receptacles that hold water for longer than 1 week (it is from these containers that most Aedes aegypti emerge).

Control households received no treatment.

Following introduction of ITMs, the total duration of both intervention and follow-up was 26 months.

### Intervention Type

Other

### Phase

Not Applicable

### Primary outcome measure

Entomological outcomes, the standard larval indices for the Aedes aegypti mosquito vector of dengue:

- 1. Breteau index: number of containers with immature stages per 100 houses
- 2. House index: number of houses containing immature stages per 100 houses
- 3. Container index: number of containers with immature stages per 100 containers with water

4. Pupal surveys were also undertaken to calculate the number of pupae per person index (number of pupae collected/human population in a sector)

Follow up surveys made to all houses at 1, 18, 24, 26 months post-intervention. Analyses to measure impact of the intervention on dengue vector populations will be undertaken according to intention to treat and per protocol (based on extent of coverage as determined in follow-up surveys).

### Secondary outcome measures

1. Seroconversion rates (as measured by IgM ELISA) in households in the treated and control sectors compared at baseline and at the trial's end. Members of each household between 2 - 8 years of age specifically selected for the study.

2. Interview surveys used to determine:

- 2.1. Household characteristics
- 2.2. Previous vector control intervention

2.3. Better understanding of the local population's knowledge, attitudes and practice about previous methods of dengue prevention and control, and about ITMs for the same purpose
3. Insecticide-susceptibility assays undertaken before, at follow-up surveys and after intervention

Each house was also georeferenced with a handheld global positioning system receiver to permit subsequent overspill effects between adjacent treated and control clusters to be quantified.

### Overall study start date

01/07/2006

# Completion date

31/10/2008

# Eligibility

**Key inclusion criteria** All occupied households

**Participant type(s)** Patient

**Age group** Other

**Sex** Both

**Target number of participants** 7,500 households

**Total final enrolment** 1122

**Key exclusion criteria** 1. Business-only premises 2. Multi-storey buildings

Date of first enrolment 01/07/2006

Date of final enrolment 31/10/2008

# Locations

**Countries of recruitment** England

United Kingdom

Venezuela

**Study participating centre Liverpool School of Tropical Medicine** Liverpool United Kingdom L3 5QA

# Sponsor information

**Organisation** Liverpool School of Tropical Medicine (UK)

**Sponsor details** Pembroke Place Liverpool United Kingdom L3 5QA

**Sponsor type** Research organisation

Website http://www.lstmliverpool.ac.uk

ROR https://ror.org/03svjbs84

# Funder(s)

**Funder type** Government

### Funder Name

European Union (EU) (Belgium) - Sixth Framework Programme (FP6): INCO-DEV-2 (ref: PL 517708)

**Funder Name** The Wellcome Trust (UK) (grant ref: 075930)

# **Results and Publications**

**Publication and dissemination plan** Not provided at time of registration

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary

### Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<u>Results article</u>	results	27/05/2006	19/02/2020	Yes	No