**CONSORT 2010 checklist of information to include when reporting a cluster randomised trial**

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| Section/Topic | Item No | Standard Checklist item | Extension for cluster designs | Response |
| Title and abstract |  |
|  | 1a | Identification as a randomised trial in the title | Identification as a cluster randomised trial in the title | Yes |
| 1b | Structured summary of trial design, methods, results, and conclusions  |  | Yes |
| Introduction |  |
| Background and objectives | 2a | Scientific background and explanation of rationale | Rationale for using a cluster design | Possible school-based herd effect of intervention |
| 2b | Specific objectives or hypotheses | Whether objectives pertain to the the cluster level, the individual participant level or both | Both |
| Methods |  |
| Trial design | 3a | Description of trial design (such as parallel, factorial) including allocation ratio | Definition of cluster and description of how the design features apply to the clusters | Cross-over design by school, covering two disease transmission seasons, so that unknown variations between schools would be controlled. |
| 3b | Important changes to methods after trial commencement (such as eligibility criteria), with reasons |  | The trial was curtailed after the first season due to the unsatisfactorily low persistence of insecticide on the school uniforms |
| Participants | 4a | Eligibility criteria for participants | Eligibility criteria for clusters  | All 24 schools in the District were eligible to participate; 10 decided to do so. Within participating schools, individual students were eligible (with parental consent). |
| 4b | Settings and locations where the data were collected |  | Schools |
| Interventions | 5 | The interventions for each group with sufficient details to allow replication, including how and when they were actually administered | Whether interventions pertain to the cluster level, the individual participant level or both | Interventions were at the individual level, with participants’ school uniforms getting insecticide treatment (intervention) or washing (control) |
| Outcomes | 6a | Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed | Whether outcome measures pertain to the cluster level, the individual participant level or both | Both; dengue infections were assessed in individual participants; and mosquito catches were made in schools. |
| 6b | Any changes to trial outcomes after the trial commenced, with reasons |  | No |
| Sample size | 7a | How sample size was determined | Method of calculation, number of clusters(s) (and whether equal or unequal cluster sizes are assumed), cluster size, a coefficient of intracluster correlation (ICC or *k*), and an indication of its uncertainty | Described in a previous paper *Trials* 2012; **13**: 212 |
| 7b | When applicable, explanation of any interim analyses and stopping guidelines |  | Adverse reactions to insecticide would have stopped the trial. |
| Randomisation: |  |
|  Sequence generation | 8a | Method used to generate the random allocation sequence |  | Random numbers generated for each participating school |
| 8b | Type of randomisation; details of any restriction (such as blocking and block size) | Details of stratification or matching if used | No stratification or matching as this was covered by the cross-over design |
|  Allocation concealment mechanism | 9 | Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned | Specification that allocation was based on clusters rather than individuals and whether allocation concealment (if any) was at the cluster level, the individual participant level or both | Random allocation known only to the investigator in Sweden who undertook the randomisation and to the company undertaking the insecticide impregnation |
|  Implementation | 10 | Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions | Replace by 10a, 10b and 10c |  |
|  | 10a |  | Who generated the random allocation sequence, who enrolled clusters, and who assigned clusters to interventions | Schools which agreed to participate were randomly assigned to intervention in first or second year of cross-over by Peter Byass |
|  | 10b |  | Mechanism by which individual participants were included in clusters for the purposes of the trial (such as complete enumeration, random sampling) | Students were included as eligible according to their school’s participation and randomisation. |
|  | 10c |  | From whom consent was sought (representatives of the cluster, or individual cluster members, or both), and whether consent was sought before or after randomisation | Consent was sought from students’ parents, and also from older students themselves. |
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| Blinding | 11a | If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how |  | Everyone working on-site in Thailand was blinded |
| 11b | If relevant, description of the similarity of interventions |  | All school uniforms were externally processed; all were washed, and for the intervention group insecticide impregnation carried out |
| Statistical methods | 12a | Statistical methods used to compare groups for primary and secondary outcomes | How clustering was taken into account | By a design factor as described in the earlier paper *Trials* 2012; **13**: 212, and by the cross-over design; a full analysis as per the design was not possible due to the early termination of the trial. |
| 12b | Methods for additional analyses, such as subgroup analyses and adjusted analyses |  | n/a |
| Results |  |
| Participant flow (a diagram is strongly recommended) | 13a | For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome | For each group, the numbers of clusters that were randomly assigned, received intended treatment, and were analysed for the primary outcome | 5 schools in each group; 679 in control and 1,132 in intervention schools (in total 1811). Analysed for the primary outcome based on complete paired blood samples were 1655 students from all 10 schools |
| 13b | For each group, losses and exclusions after randomisation, together with reasons | For each group, losses and exclusions for both clusters and individual cluster members | No lost clusters; 156 individuals did not complete paired blood samples. |
| Recruitment | 14a | Dates defining the periods of recruitment and follow-up |  | Recruitment before 2012 dengue season; follow-up during 2012 and 2013 seasons |
| 14b | Why the trial ended or was stopped |  | Unsatisfactory insecticide persistence |
| Baseline data | 15 | A table showing baseline demographic and clinical characteristics for each group | Baseline characteristics for the individual and cluster levels as applicable for each group | n/a |
| Numbers analysed | 16 | For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups | For each group, number of clusters included in each analysis | 5 |
| Outcomes and estimation | 17a | For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval) | Results at the individual or cluster level as applicable and a coefficient of intracluster correlation (ICC or k) for each primary outcome | A full analysis of the cross-over cluster randomised design was not possible due to the termination of the trial due to a lack of insecticide persistence. |
| 17b | For binary outcomes, presentation of both absolute and relative effect sizes is recommended |  | n/a |
| Ancillary analyses | 18 | Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory |  | Although the trial was terminated early, results indicated lower numbers of mosquitoes inside intervention schools immediately after insecticide impregnation |
| Harms | 19 | All important harms or unintended effects in each group  |  | none |
| Discussion |  |
| Limitations | 20 | Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses |  | The major limitation was the non-persistence of the permethrin insecticide on the uniforms, leading to the early termination of the trial. |
| Generalisability | 21 | Generalisability (external validity, applicability) of the trial findings | Generalisability to clusters and/or individual participants (as relevant) | In principle this would be generalizable to other schools in dengue endemic areas. |
| Interpretation | 22 | Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence |  | Full interpretation of the original aims of the trial is not possible following termination. |
| Other information |  |  |
| Registration | 23 | Registration number and name of trial registry |  | www.clinicaltrial.gov NCT01563640 |
| Protocol | 24 | Where the full trial protocol can be accessed, if available |  | *Trials* 2012; **13**: 212 |
| Funding | 25 | Sources of funding and other support (such as supply of drugs), role of funders |  | European Commission |