**Checklist of items to include when reporting an outbreak or intervention study of a nosocomial organism**

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|  | **Item Number** | **Descriptor** | **Response**  |
| **Title & Abstract** | 1 | Description of paper as outbreak report or intervention study.Design of intervention study (egRandomised Controlled Trial , Cluster Randomised Controlled Trial, Interrupted Time Series, Cohort study etc). Brief description of intervention and main outcomes. | This paper is a report for DENV outbreak in Hunan province of China. It has been described in the title. |
| **Introduction**Background | 2 | Scientific and/or local clinical background and rationale.Description of organism as epidemic, endemic or epidemic becoming endemic. | The relevant content has been described in the background. |
| Type of paper | 3 | Description of paper as Intervention study or an Outbreak Report. If an outbreak report, report the number of outbreaks. | There were 172 patients identified as DENV-NS1 positive. The data has been mentioned in the manuscript. |
| Dates | 4 | Start and finish dates of the study or report. | From September 2nd to October 6th in 2018, the Start and finish dates of the outbreak has been described in the background. |
| Objectives | 5 | Objectives for outbreak reports. Hypotheses for intervention studies | The aim of this report is to describe the molecular characteristic of the viral structural protein genes. |
| **Methods**Design | 6 | Study design. Use of EPOC classification recommended (RCT or CRCT, CBA, or ITS) Whether study was retrospective, prospective or ambidirectional.Whether decision to report or intervene was prompted by any outcome data.Whether study was formally implemented with predefined protocol and endpoints. | The study design has been introduced in the Methods section of the manuscript. |
| Participants | 7 | Number of patients admitted in study or outbreak. Summaries of distributions of age and lengths of stays. If possible, proportion admitted from other wards, hospitals, nursing homes or from abroad. Where relevant, potential risk factors for acquiring the organism. Eligibility criteria for study. Case definitions for outbreak report. | The number of patients admitted in study has been mentioned in Background section of the manuscript. Fever and DENV NS1 positive were the criteria for patient. The case definitions have been described. |
| Setting | 8 | Description of the unit, ward or hospital and, if a hospital, the units included.Number of beds, the presence and staffing levels of an infection control team. | The serum samples were collected from patients hospitalized in two local hospitals. The members of infection control team were all trained well in dealing with infectious disease. |
| Interventions | 9 | Definition of phases by major change in specific infection control practice (with start and stop dates). A summary table is strongly recommended with precise details of interventions, how and when administered in each phase. | This study is an epidemiological research, not involving the content of clinical intervention. |
| Culturing & Typing | 10 | Details of culture media, use of selective antibiotics and local and /or reference typing. Where relevant, details of environmental sampling. | This study does not involve the content of tissue culture |
| Infection-related outcomes | 11 | Clearly defined primary and secondary outcomes (eg incidence of infection, colonisation ,bacteraemia) at regular time intervals (eg daily, weekly, monthly) rather than as totals for each phase, with at least three data points per phase and, for many two phase studies, 12 or more monthly data points per phase. Denominators (eg numbers admissions or discharges, patient bed days). If possible, prevalence of organism and incidence of colonisation on admission at same time intervals. Criteria for infection, colonisation on admission and directly attributable mortality.For short studies or outbreak reports, use of charts with duration patient stay & dates organism detected may be useful (see text) | This study is an epidemiological research. The aim of this report is to describe the molecular characteristic of the viral structural protein genes. The serum samples were collected from patients hospitalized in two local hospitals. The authors were neither involved in hospital patients observation nor treatment. |
| Economicoutcomes | 12 | If a formal economic study done, definition of outcomes to be reported, description of resources used in interventions, with costs broken down to basic units, stating important assumptions. | This study didn't involve this content. |
| Potential Threats to internal validity | 13 | Which potential confounders were considered, recorded or adjusted for (eg: changes in length of stay, case mix, bed occupancy, staffing levels, hand-hygiene compliance, antibiotic use, strain type, processing of isolates, seasonality). Description of measures to avoid bias including blinding & standardization of outcome assessment & provision of care. | This study didn't involve this content. |
| Sample size | 14 | Details of power calculations, where appropriate | This study did not acquire power calculation. |
| Statistical methods | 15 | Description of statistical methods to compare groups or phases. Methods for any subgroup or adjusted analyses, distinguishing between planned and unplanned (exploratory) analysis. Unless outcomes are independent, statistical approaches able to account for dependencies in the outcome data should be used, adjusting, where necessary, for potential confounders.For outbreak reports statistical analysis may be inappropriate. | The statistical methods have been described in Methods section. |
| **Results**Recruitment | 16 | For relevant designs the dates defining periods of recruitment and follow-up. A flow diagram is recommended to describe participant flow in each stage of study. | The study design has been introduced in the Methods section of the manuscript, and the sample number of the patients involved in the study is also described in the flowchart. |
| Outcomes &estimation | 17 | For the main outcomes, the estimated effect size and its precision (usually using confidence intervals). A graphical summary of the outcome data is often appropriate for dependent data (such as most time series). | This study is an epidemiological research. The aim of this report is to describe the molecular characteristic of the viral structural protein genes. so this study didn't involve this content. |
| Ancillary analyses | 18 | Any subgroup analyses should be reported and it should be stated whether or not it was planned (specified in the protocol) and possible confounders adjusted for | This study did not involve or planed in subgroup observation. |
| Adverse events | 19 | Pre-specified categories of adverse events and occurrences of these in each intervention group. This might include drug side effects, crude or disease specific mortality in antibiotic policy studies or opportunity costs in isolation studies. | This study did not including intervention research. |
| **Discussion**Interpretation | 20 | For intervention studies an assessment of evidence for/against hypotheses, accounting for potential threats to validity of inference including regression to mean effects and reporting bias.For outbreak reports, consider clinical significance of observations and hypotheses generated to explain them. | The possible causes of this dengue outbreak have been described in the discussion section. |
| Generalisability | 21 | External validity of the findings of the intervention study i.e. to what degree can results be expected to generalise to different target populations or settings. | This study did not including intervention research. |
| Overall evidence | 22 | General interpretation of results in context of current evidence. | The relevant content has been described in the discussion section. |

**Abbreviations:** RCT: randomised controlled trial CRCT : Cluster Randomised Controlled Trial CBA: controlled before and after study ITS: interrupted time series