

Supplementary material to: Sun L, Smitasin N, Salada BMA, et al.
A multicomponent control programme in nursing homes in Singapore.
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STROBE Statement—Checklist of items that should be included in reports of *cohort studies*

	Item No	Recommendation
Title and abstract	1	<p>(a) Indicate the study’s design with a commonly used term in the title or the abstract Retrospective cohort study</p> <p>(b) Provide in the abstract an informative and balanced summary of what was done and what was found Structured abstract summarising introduction, methods, results, and conclusions (see Abstract section)</p>
Introduction		
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported Nursing home residents are vulnerable to infections and avoidable hospital transfers; strengthened IPC and improved on-site decision-making may reduce preventable admissions
Objectives	3	State specific objectives, including any prespecified hypotheses To evaluate the effectiveness of the IDCP programme using routinely available data, assessing its impact on infection prevention outcomes, vaccination coverage, and appropriateness of hospital transfers.
Methods		
Study design	4	Present key elements of study design early in the paper Retrospective observational cohort study comparing pre-implementation (2015–2017) and post-implementation (2019–2021) periods.
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection Six nursing homes in western Singapore; pre-implementation period 2015–2017, wash-out year 2018, post-implementation period 2019–2021.
Participants	6	<p>(a) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up Hospital admissions of nursing home residents screened from hospital records; 4,801 admissions screened, 2,045 fever-related admissions included.</p> <p>(b) For matched studies, give matching criteria and number of exposed and unexposed Not applicable</p>
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable Outcomes: MRSA acquisition, inappropriate hospital transfers, influenza vaccination uptake Exposure: IDCP implementation Other variables: fever-related admissions
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group Data obtained from hospital electronic medical records, nursing home transfer forms, and IDCP logs; MRSA identified through routine admission and discharge screening.
Bias	9	Describe any efforts to address potential sources of bias Consistent data collection processes before and after implementation; limitations including retrospective design, missing data, and potential confounding acknowledged.

Study size	10	Explain how the study size was arrived at Study size determined by available data from six nursing homes with complete pre- and post-implementation datasets.
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why Proportions compared between pre- and post-implementation periods.
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding Chi-square tests used to compare proportions; no adjustment for confounders. (b) Describe any methods used to examine subgroups and interactions Analyses performed at both individual nursing home and aggregate level. (c) Explain how missing data were addressed Facilities with incomplete pre-intervention data excluded from specific analyses. (d) If applicable, explain how loss to follow-up was addressed Not applicable (e) Describe any sensitivity analyses No sensitivity analyses performed
Results		
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed 4,801 admissions screened; 2,045 fever-related admissions included; subset analyses conducted for facilities with complete data. (b) Give reasons for non-participation at each stage Exclusion due to incomplete pre-intervention data. (c) Consider use of a flow diagram Not applicable
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders Participant characteristics not available due to data limitations. (b) Indicate number of participants with missing data for each variable of interest Missing data present due to incomplete documentation and data availability. (c) Summarise follow-up time (eg, average and total amount) Not applicable
Outcome data	15*	Report numbers of outcome events or summary measures over time MRSA acquisition rates, inappropriate transfer rates, vaccination coverage, and survey findings reported.
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included Unadjusted estimates with 95% confidence intervals reported; no confounder adjustment. (b) Report category boundaries when continuous variables were categorized Not applicable (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period Absolute and relative differences reported.
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses Not applicable

Discussion		
Key results	18	Summarise key results with reference to study objectives IDCP implementation was associated with reductions in MRSA acquisition and inappropriate transfers, and increased vaccination uptake. (Discussion section)
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias Limitations include Retrospective design, reliance on routinely collected data, lack of resident-level characteristics, single regional cluster, and potential confounding including COVID-19. (Discussion section)
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence Findings interpreted as a pragmatic evaluation of a real-world programme; causality cannot be established. (Discussion section)
Generalisability	21	Discuss the generalisability (external validity) of the study results Generalisability may be limited as the study was conducted within a single regional cluster of nursing homes with specific resource and care structures (Discussion section)
Other information		
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based Partial support from Jurong Health Fund for the IDCP; no role in study design, data collection, analysis, or manuscript preparation.

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at <http://www.strobe-statement.org>.