

## Newcastle-Ottawa Scale adapted for cross-sectional studies

### Selection:

1. Representativeness of the sample:
  - a. Truly representative of the average in the target population. \* (all subjects or random sampling)
  - b. Somewhat representative of the average in the target group. \* (non-random sampling)
  - c. Selected group of users/convenience sample.
  - d. No description of the derivation of the included subjects.
2. Sample size:
  - a. Justified and satisfactory (including sample size calculation). \*
  - b. Not justified.
  - c. No information provided
3. Non-respondents:
  - a. Proportion of target sample recruited attains pre-specified target or basic summary of non-respondent characteristics in sampling frame recorded. \*
  - b. Unsatisfactory recruitment rate, no summary data on non-respondents.
  - c. No information provided
4. Ascertainment of the exposure (risk factor):
  - a. Vaccine records/vaccine registry/clinic registers/hospital records only. \*\*
  - b. Parental or personal recall and vaccine/hospital records. \*
  - c. Parental/personal recall only.

### Comparability: (Maximum 2 stars)

1. Comparability of subjects in different outcome groups on the basis of design or analysis. Confounding factors controlled.
  - a. Data/ results adjusted for relevant predictors/risk factors/confounders e.g. age, sex, time since vaccination, etc. \*\*
  - b. Data/results not adjusted for all relevant confounders/risk factors/information not provided.

### Outcome:

1. Assessment of outcome:
  - a. Independent blind assessment using objective validated laboratory methods. \*\*
  - b. Unblinded assessment using objective validated laboratory methods. \*\*
  - c. Used non-standard or non-validated laboratory methods with gold standard. \*
  - d. No description/non-standard laboratory methods used.
2. Statistical test:
  - a. Statistical test used to analyse the data clearly described, appropriate and measures of association presented including confidence intervals and probability level (p value). \*
  - b. Statistical test not appropriate, not described or incomplete.

Cross-sectional Studies:

Very Good Studies: 9-10 points

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Good Studies: 7-8 points

Satisfactory Studies: 5-6 points

Unsatisfactory Studies: 0 to 4 points

This scale has been adapted from the Newcastle-Ottawa Quality Assessment Scale for cohort studies to provide quality assessment of cross sectional studies<sup>1</sup>.

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<sup>1</sup> Herzog R, et al. Is Healthcare Workers' Intention to Vaccinate Related to their Knowledge, Beliefs and Attitudes? A Systematic Review. *BMC Public Health* 2013 **13**:154