

# The majority of non-randomized studies had one possible bias, few reported all key study elements and few had an available protocol.

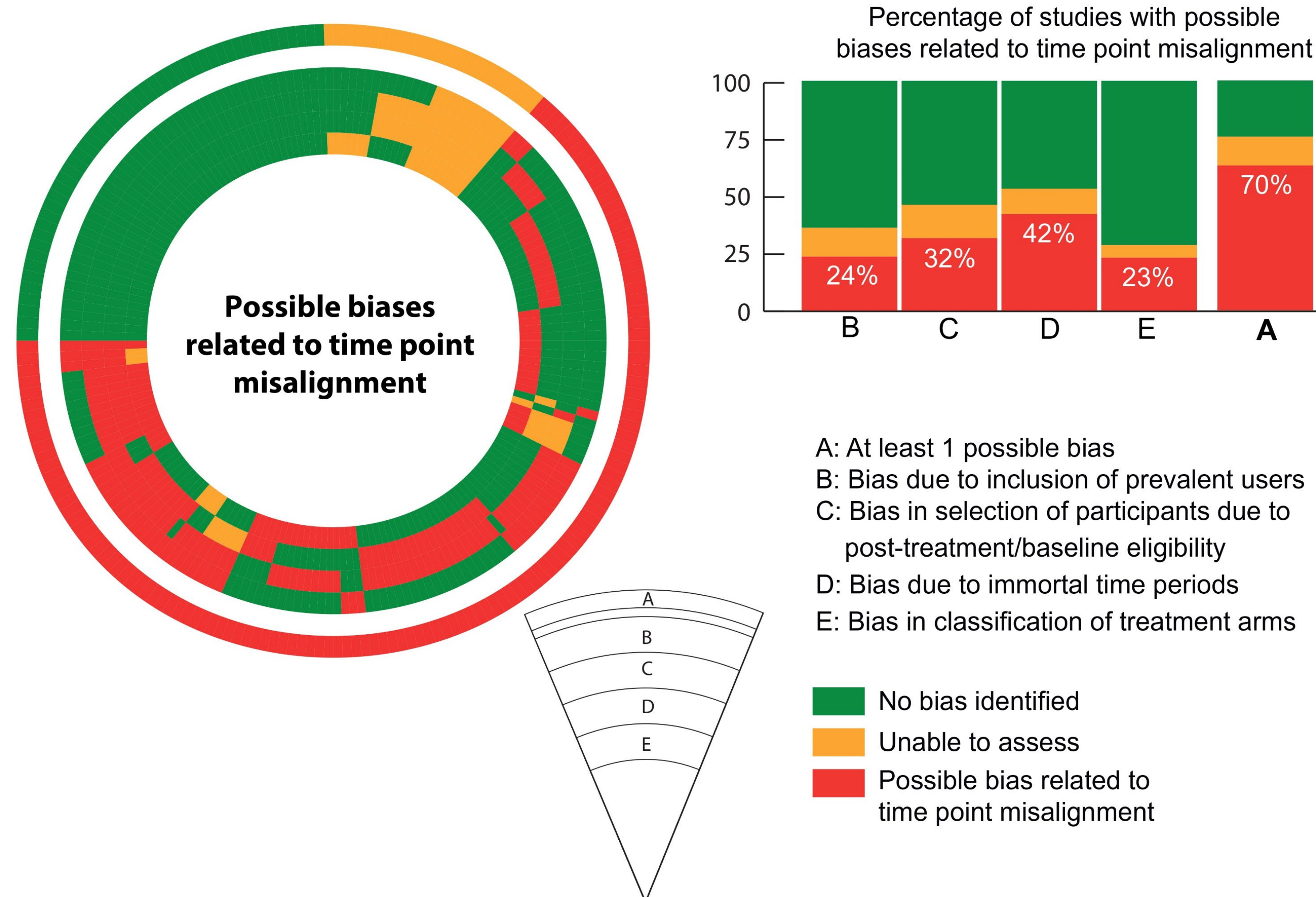
## Characteristics of non-randomized studies of pharmacologic treatment: a cross-sectional study

**BACKGROUND** Non-randomized studies can generate valuable evidence for decision-making, however the collective issues of heterogeneity and limitations in their conduct, analysis, and reporting remain understudied. Our objective was to **examine the characteristics of non-randomized studies of pharmacologic treatment.**

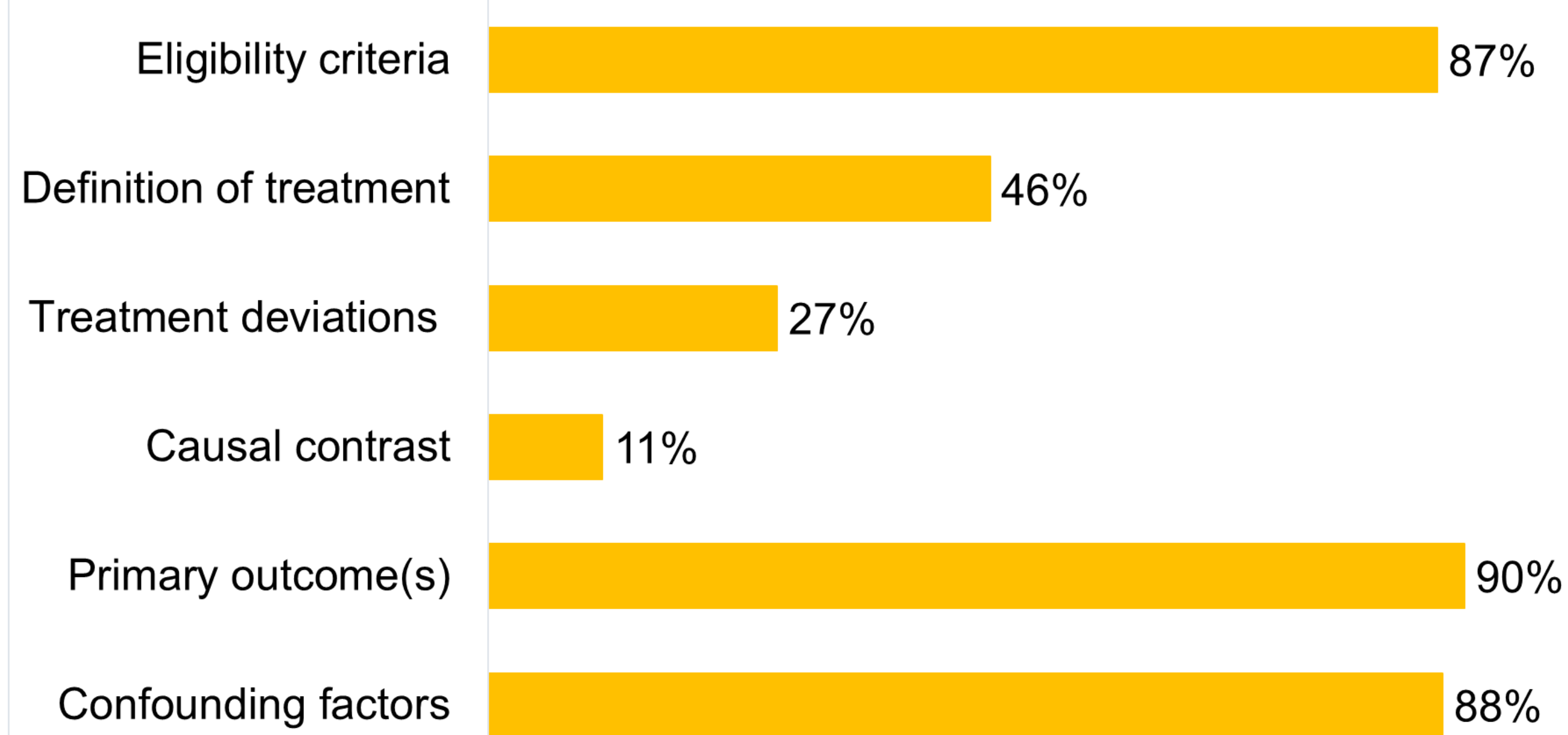
### RESULTS

200 reports

70% had one possible bias



2% reported all key study elements



### METHODS

Cross-sectional

- Inclusion criteria: comparative non-randomized studies of pharmacologic treatment, accounting for confounders
- MEDLINE (OVID): June-August 2022
- Ranked in **random order**, screened until **200 eligible reports** identified
- Standardized data extraction form inspired by: RECORD, ROBINS-I, target trial emulation framework, etc.
- Duplicate (independently or verification)

General characteristics	n (%)
Study design: Cohort	189 (95)
Data used: RCD*	126 (67)
Source of RCD: EHR <sup>†</sup>	49 (36)
Validation studies of codes and algorithms <sup>†</sup>	10 (7)
Registration	14 (7)
Protocol available	5 (3)
Data sharing statement	123 (62)
Access to codes or algorithms	9 (5)

RCD: routinely collected data; EHR: electronic health records; \*N=188; <sup>†</sup>N=137

### LIMITATIONS

- Did not assess all biases
- Assessments based on the reporting of studies

**CONCLUSION** While access to real-world evidence could be valuable, it is necessary to enhance the robustness and transparency of non-randomized studies.

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