Consistency of Published Observational/Real-World Studies With the STROBE Guidelines: An Analysis of 3 Indications

Yunyu Huang¹, Rebecca Czolk¹*, Irene Escudero¹*, Irina Milanova¹*, Sumitra Mitra¹*, Emma Thomas¹*, Marie Vidal¹*, Remon van den Broek², Rosie Morland³ ¹Excerpta Medica, Amstelveen, Netherlands; ²Adelphi Group, Amstelveen, Netherlands; ³Excerpta Medica, London, UK *Contributed equally



Objective

To assess the transparency of reported data from observational/real-world studies via a targeted literature review, by evaluating published articles using the STROBE guidelines/checklist

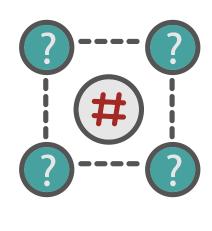
Background



As acknowledged by the ISPOR/ISPE task force and ISMPP guidelines, improving transparency in reporting real-world data is essential



The STROBE (STrengthening the Reporting of OBservational studies in Epidemiology) reporting guidelines and checklist provide a blueprint for the elements that should ideally be included in articles reporting observational studies



However, compliance of published observational studies with the STROBE reporting guidelines is unknown

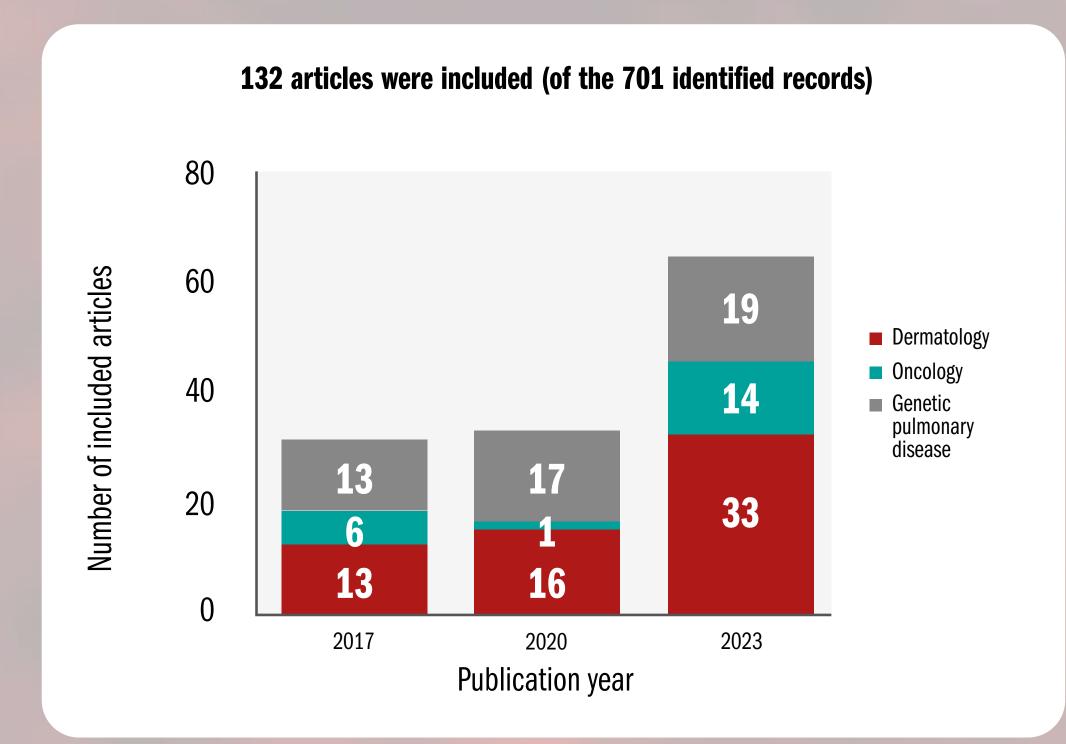
Conclusions

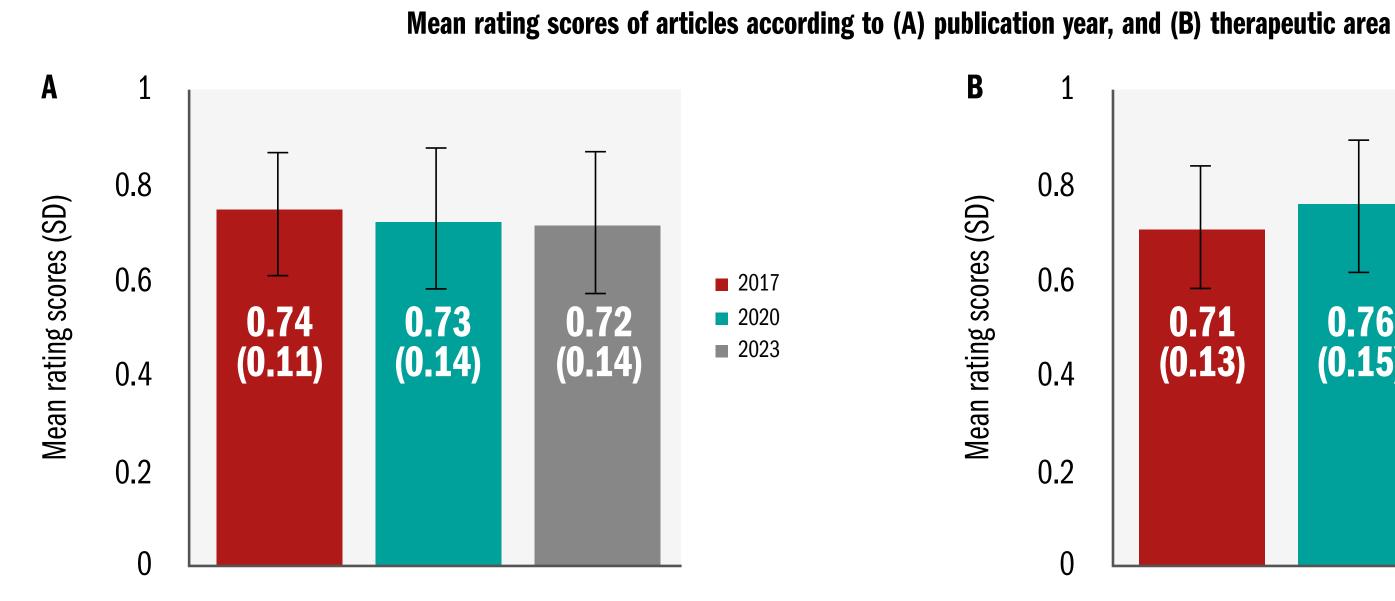
- Our review identified **frequent transparency deficiencies** in the Methods and Results sections of peer-reviewed articles reporting observational studies across selected indications, with no significant differences over time or between indications
- These results highlight the need for improved adherence to reporting guidelines in real-world data publications
- Transparent reporting of real-world data benefits research by enhancing credibility and reproducibility, and also helps ensure that the data driving health decision-making are robust and relevant to real-world healthcare systems

Methods

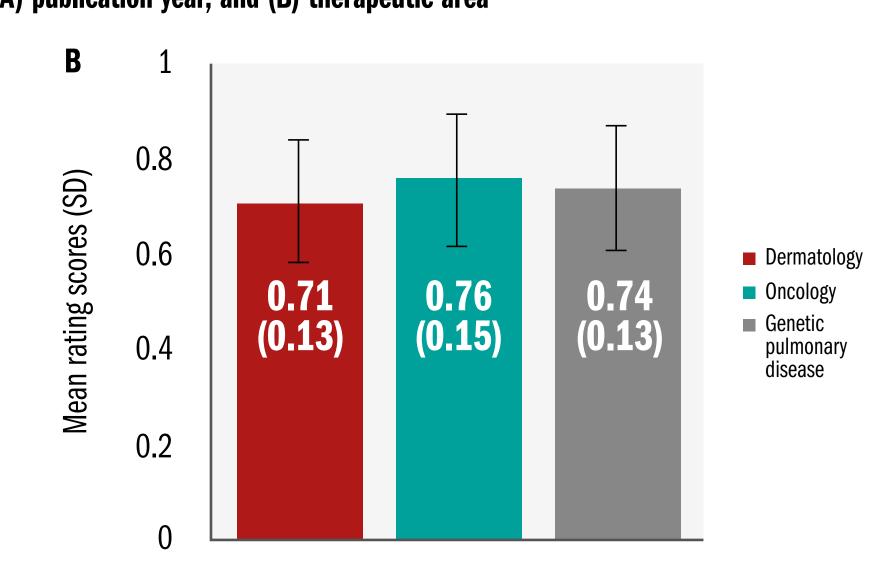
- We performed an Embase search to identify articles reporting observational data in 3 indications in the fields of dermatology, oncology, and genetic pulmonary disease
- Articles from 2017, 2020, and 2023 were selected to explore longitudinal changes in reporting transparency
- Articles were scored 1 (yes), 0 (no), or 'not applicable' for the presence of each of the 34 STROBE checklist items/sub-items
- Scores (range 0–1) were calculated per article and per article section as the proportions of applicable checklist items (score = 1)
- Non parametric Kruskal-Wallis tests were used to compare mean scores between years and indications
- For further details on the methodology / results, please check the e-poster via the QR code

Results





No significant difference across years (P = 0.66)



• No significant difference across the rapeutic areas (P = 0.12)

Reporting frequency of individual STROBE items and sub-items with frequency <40% and >90% (all years and therapeutic areas) Reporting frequency, % 100 Introduction 2. Background/rationale 5. Setting 9. Bias 12. Statistical methods (c) missing data 12. Statistical methods (d) design feature Methods 12. Statistical methods (e) sensitivity analyses 13. Participants (c) flow diagram 14. Descriptive data (a) characteristics 14. Descriptive data (b) missing data 15. Outcome data Results 16. Main results (c) absolute risk 18. Key results summary Discussion 20. Interpretation ■ Frequency < 40% ■ Frequency > 90%

