# TRIPOD Checklist: Prediction Model Development

| Section | Item | Checklist description | Reported on Page Number/Line Number | Reported on Section/Paragraph |
|---------|------|-----------------------|-------------------------------------|-----------------------------|
| **Title and abstract** | 1 | Identify the study as developing and/or validating a multivariable prediction model, the target population, and the outcome to be predicted. | Page1/Line3-4 | Title/Paragraph1 |
| | 2 | Provide a summary of objectives, study design, setting, participants, sample size, predictors, outcome, statistical analysis, results, and conclusions. | Page2/Line3-29 | Abstract/Paragraph1 |
| **Introduction** | 3a | Explain the medical context (including whether diagnostic or prognostic) and rationale for developing or validating the multivariable prediction model, including references to existing models. | Page3/Line2-28 | Introduction/Paragraph1-3 |
| | 3b | Specify the objectives, including whether the study describes the development or validation of the model or both. | Page3/Line29-Page4/Line 2 | Introduction/Paragraph4 |
| **Methods** | 4a | Describe the study design or source of data (e.g., randomized trial, cohort, or registry data), separately for the development and validation data sets, if applicable. | Page4/Line4-13 | Methods/Paragraph1 |
| | 4b | Specify the key study dates, including start of accrual; end of accrual; and, if applicable, end of follow-up. | Page4/Line4-13 | Methods/Paragraph1 |
| | 5a | Specify key elements of the study setting (e.g., primary care, secondary care, general population) including number and location of centres. | Page4/Line4-13 | Methods/Paragraph1 |
| | 5b | Describe eligibility criteria for participants. | Page4/Line4-13 | Methods/Paragraph1 |
| | 5c | Give details of treatments received, if relevant. | Page4/Line4-13 | Methods/Paragraph1 |
| **Outcome** | 6a | Clearly define the outcome that is predicted by the prediction model, including how and when assessed. | Page4/Line17-18 | Methods/Paragraph2 |
| | 6b | Report any actions to blind assessment of the outcome to be predicted. | Page4/Line17-18 | Methods/Paragraph2 |
| **Predictors** | 7a | Clearly define all predictors used in developing or validating the multivariable prediction model, including how and when they were measured. | Page5/Line4-9 | Methods/Paragraph5 |
| | 7b | Report any actions to blind assessment of predictors for the outcome and other predictors. | Page5/Line4-9 | Methods/Paragraph5 |
| **Sample size** | 8 | Explain how the study size was arrived at. | Page4/Line30-33 | Methods/Paragraph4 |
| Section                      | Page/Line | Method/Paragraph |
|------------------------------|-----------|------------------|
| Missing data                 | 9         | Methods/Paragraph2 |
| Statistical analysis methods | 10a       | Methods/Paragraph6-8 |
|                              | 10b       | Methods/Paragraph6-8 |
|                              | 10d       | Methods/Paragraph6-8 |
| Risk groups                  | 11        | Methods/Paragraph5 |
| Results                      |           |                  |
| Participants                 | 13a       | Results/Paragraph1 |
|                              | 13b       | Results/Paragraph1 |
| Model development            | 14a       | Results/Paragraph2-3 |
|                              | 14b       | Results/Paragraph2-3 |
| Model specification          | 15a       | Results/Paragraph4-5 |
|                              | 15b       | Results/Paragraph4-5 |
| Model performance            | 16        | Results/Paragraph6 |
| Discussion                   | 18        | Discussion/Paragraph1-7 |
| Limitations                  | 19b       | Discussion/Paragraph1-7 |
| Interpretation               | 20        | Discussion/Paragraph1-7 |
| Implications                 | 21        | Other information/Paragraph1 |
| Supplementary information    | 22        | Other           |
| Funding                      | 22        | Other           |
Article information: https://dx.doi.org/10.21037/atm-21-2402
*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.