Risk of bias assessment form: Using FeNO to guide step down treatment decisions in asthma
Name of assessor:_____   *Study citation:_____*

Risk of bias domain	Assessment criteria	Assessment	Justification of assessment
Study participation • *Did the study include patients with clinician diagnosed asthma maintained on low or medium doses of inhaled corticosteroids?* • *If only a subset of participants is relevant to the research question, are the characteristics of that subset likely to be significantly different to those of the rest of the study population? If so, how?*	**Low risk of bias:** participants whose data would be relevant for the review are unlikely to be different from other individuals in the same study population or individuals who were eligible but did not take part. **Moderate risk of bias:** participants whose data would be relevant for the review may be different from other individuals in the same study population or who were eligible but did not take part. **High risk of bias:** participants whose data would be relevant for the review are very likely to be different from other individuals in the same study population or individuals who were eligible but did not take part. **Unclear risk of bias:** insufficient information reported to assess risk of bias according to the above criteria.		
Study attrition • *Were attempts made to collect outcome data from all study participants whose data would be relevant to this review?* • *What proportion of participants were outcome data obtained from?* • *Were reasons provided for loss to follow-up in those participants from who outcome data were not obtained?* • *Were the characteristics of participants lost to follow-up different from those of participants from whom outcome data were obtained?*	**Low risk of bias:** the relationship between FeNO and acute exacerbations of asthma after stepping down treatment is unlikely to be different for study participants from whom outcome data were obtained versus participants who were lost to follow-up. **Moderate risk of bias:** the relationship between FeNO and acute exacerbations of asthma after stepping down treatment may be different for study participants from whom outcome data were obtained versus participants who were lost to follow-up. **High risk of bias:** the relationship between FeNO and acute exacerbations of asthma after stepping down treatment is very likely to be different for study participants from whom outcome data were obtained versus participants who were lost to follow-up. **Unclear risk of bias:** insufficient information reported to assess risk of bias according to the above criteria.		
Measurement of FeNO • Was FeNO measured in all participants whose data would be relevant to this review? • Was FeNO measured using the same analyser in all participants?	**Low risk of bias:** Measurement of FeNO is unlikely to be different for study participants who had acute exacerbations of asthma after stepping down treatment compared to those who did not have acute exacerbations.		

• Was FeNO measured at the same flow rate(s) in all participants? • Was FeNO reported as a continuous variable or using consistently defined categories across all participants?	**Moderate risk of bias:** Measurement of FeNO is may be different for study participants who had acute exacerbations of asthma after stepping down treatment compared to those who did not have acute exacerbations. **High risk of bias:** Measurement of FeNO is very likely to be different for study participants who had acute exacerbations of asthma after stepping down treatment compared to those who did not have acute exacerbations. **Unclear risk of bias:** insufficient information reported to assess risk of bias according to the above criteria.		
Measurement of acute exacerbations of asthma • Did the authors clearly define acute exacerbations of asthma or pre-specified improvements in measures relevant to acute exacerbations (treatment with systemic corticosteroids or antibiotics, hospital admission or unscheduled health care visits due to asthma)? • Were these definitions consistent across all study participants whose data would be relevant to this review? • Were the methods used to obtain measures relevant to acute exacerbations of asthma consistent across all study participants whose data would be relevant to this review?	**Low risk of bias:** Measurement of acute exacerbations of asthma is unlikely to be different between study participants with different baseline FeNO values. **Moderate risk of bias:** Measurement of acute exacerbations of asthma may be different between study participants with different baseline FeNO values. **High risk of bias:** Measurement of acute exacerbations of asthma is very likely to be different between study participants with different baseline FeNO values. **Unclear risk of bias:** insufficient information reported to assess risk of bias according to the above criteria.		
Study confounding • Did the authors measure important potential baseline confounders (age, sex, smoking status, Body Mass Index, history of atopy)? • Did the authors provide clear explanations of how they defined these confounders? • Were all potential confounders measured using reliable methods?	**Low risk of bias:** The observed relationship between FeNO and acute exacerbations of asthma is unlikely to be distorted by potential confounding factors. **Moderate risk of bias:** The observed relationship between FeNO and acute exacerbations of asthma may be distorted by potential confounding factors. **High risk of bias:** The observed relationship between FeNO and acute exacerbations of asthma is unlikely to be distorted by potential confounding factors.		

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• Were data on potential confounders available for all participants whose data would be relevant to this review? • Did the statistical analysis account for potential confounders?	**Unclear risk of bias:** insufficient information reported to assess risk of bias according to the above criteria.		
Statistical analysis and reporting • Did the authors provide clear explanations of the statistical methods used? • Did the study report results relating to the association between FeNO at baseline and acute exacerbations of asthma? • Did the study report both crude (i.e. unadjusted) results and results adjusted for potential baseline confounders? • Was there any selective reporting of results?	**Low risk of bias:** The reported association between FeNO and acute exacerbations of asthma is unlikely to be spurious or biased related to analysis or reporting. **Moderate risk of bias:** The reported association between FeNO and acute exacerbations of asthma may be spurious or biased related to analysis or reporting. **High risk of bias:** The reported association between FeNO and acute exacerbations of asthma is very likely to be spurious or biased related to analysis or reporting. **Unclear risk of bias:** insufficient information reported to assess risk of bias according to the above criteria.		