

# QUADAS-2 (adapted for validation of recording of asthma exacerbations in healthcare databases review)

## Domain 1: Patient selection

### A. Risk of bias

Describe methods for patient selection:

- Was a consecutive or random sample of patients enrolled? YES/NO/UNCLEAR
- Was a case-control design avoided? YES/NO/UNCLEAR
- Did the study avoid inappropriate exclusions? YES/NO/UNCLEAR

**Could the patient selection have introduced bias? RISK: HIGH/LOW/UNCLEAR**

*(Score low if answers to all signalling questions were yes. Score high if any answers were no. Score unclear if any were answered as unclear with remainder scoring low)*

### B. Concerns regarding applicability

Describe included patients:

- Were patients from a single EHR database that comprised patients from one specific setting (e.g. primary or secondary care only patients)? YES/NO/ UNCLEAR
- Were patients recorded with a diagnosis of asthma? YES/NO/UNCLEAR

**Is there concern that the included patients do not match the review question?**

**CONCERN: HIGH/LOW/UNCLEAR**

*(Score low answered yes to both questions. Score high if no to both questions. Score unclear if one marked as unclear.)*

## Domain 2: Index test(s)

### A. Risk of bias

Describe the index test and how it was conducted and interpreted:

- Was the detection algorithm for exacerbations of asthma designed without knowledge of the result of the reference standard (in the final validated population)? YES/NO/UNCLEAR

**Could the interpretation of the index test have introduced bias?**

**RISK: HIGH/LOW/UNCLEAR**

*(Score low if all answers to signalling questions were yes. Score high if any were answered no. Score unclear if any were answered as unclear with remainder scoring low).*

### **B. Concerns regarding applicability**

- Were specific clinical codes / algorithms used to identify patients (i.e. a free text search wasn't used as part of patient identification)? YES/NO

**Is there concern that the index test, its conduct or interpretation differ from the review question?**

**CONCERN: HIGH/LOW/UNCLEAR**

*(Score low if clear descriptions of clinical codes/algorithms were given to identify patients.)*

## **Domain 3: Reference standard**

### **A. Risk of bias**

Describe the reference standard and how it was conducted and interpreted:

- Is the reference standard likely to correctly classify the target condition?

YES/NO/UNCLEAR

- Were the reference standard results interpreted without knowledge of the index test?

YES/NO/UNCLEAR

**Could the reference standard, its conduct, or its interpretation have introduced bias?**

**RISK: HIGH/LOW/UNCLEAR**

*(Score low if all answers to signalling questions were yes. Score high if any were answered no. Score unclear if any were answered as unclear with remainder scoring low)*

### **B. Concerns regarding applicability**

- Was there a confirmed diagnosis of asthma in the records? YES/NO/UNCLEAR
- Was diagnosis confirmed by a physician reviewing the patient's medical record?

YES/NO/UNCLEAR

- Did more than one physician review the medical record to confirm diagnosis and was

there strong agreement between the reviewing physicians? YES/NO/UNCLEAR

**Is there concern that the target condition as defined by the reference standard does not match the review question? CONCERN: HIGH/LOW/UNCLEAR**

*(Score low if all answers to signalling questions were yes. Score high if any were answered no. Score unclear if any were answered unclear with the remainder low).*

## **Domain 4: Flow and timing**

### **A. Risk of bias**

- Did all patients receive a reference standard? YES/NO/UNCLEAR
- Did patients receive the same reference standard? YES/NO/UNCLEAR
- Were all patients included in the analysis? YES/NO/UNCLEAR

**Could the patient flow have introduced bias? RISK: HIGH/LOW/UNCLEAR**

*(Score low if all answers to signalling questions were yes. Score high if any answers were no. Score unclear if any were answered as unclear with the remainder scoring low).*