

Assertion Annotation Guidelines

Assertions are an attribute of the medical problem concepts that are marked in the concept extraction task. As such, this task involves classifying each medical problem into an assertion category. Each medical problem will be assigned to one of six categories of assertions. The classification task is not to determine whether the patient ever had the problem, but to determine what the note asserts the medical problem to be based on the context in which it is used.

This guideline describes the categories of assertions in which medical problems can be classified and provides examples similar to those that may be found in the clinical texts. For each category, instances of medical problems that would be classified into the assertion category are marked in **BLUE**.

Assertions are time independent. This means that a problem experienced in the past and a problem the patient currently has can both be classified in the same assertion category.

The assertion categories are:

1. Present
2. Absent
3. Possible
4. Conditional
5. Hypothetical
6. Not associated with the patient

- 1) *Present*: problems associated with the patient can be present. This is the default category for medical problems and it contains that do not fit the definition of any of the other assertion category.
 - *the wound was noted to be clean with mild serous drainage*
 - *history of chest pain*
 - *patient had a stroke*
 - *the patient experienced a the drop in hematocrit*
 - *the patient has had increasing weight gain*
 - *He has pneumonia*
- 2) *Absent*: the note asserts that the problem does not exist in the patient. This category also includes mentions where it is stated that the patient HAD a problem, but no longer does.
 - *patient denies pain*
 - *no fever*

- *no history of **diabetes***
 - ***No pneumonia** was suspected*
 - *History inconsistent with **stroke***
 - ***his dyspnea** resolved*
 - ***elevated enzymes** resolved*
- 3) *Possible*: the note asserts that the patient may have a problem, but there is uncertainty expressed in the note. Possible takes precedence over absent, so terms like “probably not” or “unlikely” categorize problems as being possible just as “probably” and “likely” do.
- *This is very likely to be **an asthma exacerbation** .*
 - *Doctors suspect **an infection of the lungs** .*
 - *The patient came in to rule out **pneumonia** .*
 - *Questionable / small chance of **pneumonia** .*
 - ***Pneumonia** is possible / probable*
 - *Suspicion of **pneumonia***
 - *We are unable to determine whether she has **leukemia**.*
 - *It is possible / likely / thought / unlikely that she has **pneumonia***
 - *We suspect this is not **pneumonia***
 - *this is probably not **cancer***
 - ***pneumonia** unlikely*
- 4) *Conditional*: the mention of the medical problem asserts that the patient experiences the problem only under certain conditions. Allergies can fall into this category.
- *Patient has had **increasing dyspnea** on exertion*
 - *Penicillin causes **a rash***
 - *Patient reports **shortness of breath** upon climbing stairs.*
- 5) *Hypothetical*: medical problems that the note asserts the patient may develop.
- *If you experience **wheezing** or **shortness of breath***
 - *Ativan 0.25 to 0.5 mg IV q 4 to 6 hours prn **anxiety***
- 6) *Not associated with Patient*: the mention of the medical problem is associated with someone who is not the patient.
- *Family history of **prostate cancer***
 - *Brother had **asthma***