

Developing diagnostic skill

A useful exercise to help you recognise the heuristics you use when making diagnoses in your specialty area is given below. Read through the worked example for the diagnosis of 'Bacterial tonsillitis' and then use the form to construct your own examples.

Diagnosis: Bacterial tonsillitis

Competing diagnoses: Viral URTI, Glandular fever

Key features¹ of diagnosis: (rank these and list duplicate features on the same line)

1.	Exudates on the tonsils (red pharynx, enlargement of tonsils)
2.	Temperature > 37.5C (general malaise)
3.	Tender, enlarged sub-mandibular lymph glands
4.	Pain on swallowing or talking (palatal speech)
5.	

Features that help to eliminate competing diagnoses:

Feature	Diagnosis made less likely
Absence of cough, dry or productive	Viral URTI
Presence of runny nose, sneezing	Viral URTI
Duration of illness less than one week	Glandular fever
No enlarged lymph glands in axilla/groin	Glandular fever

The example given above is firmly evidence based. The diagnostic criteria for bacterial tonsillitis have been well researched and published as the Centor criteria¹⁰. However, there are many 'heuristics' we use that are less validated. A good example is the belief that the colour of sputum predicts if a cough is due to a viral illness or bronchitis. The 'heuristic' is *green sputum – bacterial, clear white sputum – viral*. In reality many patients with bronchitis that may need antibiotic treatment have clear sputum, and others with viral illness purulent sputum. The best available evidence suggests that this rule is only true for a tiny minority of patients with productive cough^{11 12}. It is wise therefore to question the validity of 'heuristics' you and others use. Even when the evidence is strong, as for the Centor criteria, it is important to realise that it only applies to the population in which it has been validated (in this case, first contact care patients in a developed country). The criteria have not been established in developing countries where disease patterns are very different.

¹ A 'feature' is a symptom, examination finding or test result.