**The Symptom Manager Module**

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The Symptom Manager module tracks the prevalence of a list of generic symptoms and specific symptoms that are declared by the disease modules. The list of generic symptoms is:

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| fever |
| vomiting |
| stomachache |
| sore\_throat |
| respiratory\_symptoms |
| headache |
| skin\_complaint |
| dental\_complaint |
| backache |
| injury |
| eye\_complaint |
| diarrhoea |

Note that the definitions of each of the generic symptoms is inherited from the responses given by the participants in two analyses by Ng’ambi *et al.[[1]](#footnote-1)*.

In addition to these, disease modules declare the additional set of symptoms that pertains to that disease (These can overlap with the set of symptoms pertaining to other disease modules).

Disease modules use utility functions (including, ‘*who\_has*’, ‘*has\_what’* and ‘*causes\_of*’) to find, respectively, the list of person\_ids who have a particular set of symptoms, the list of symptoms that a person is currently experiencing, or the list of disease module names that are currently imposing a particular symptom on a particular person.

Disease modules can specify that a symptom is onset or resolved for one or more individual by calling *change\_symptom()*. Optional parameter of *date\_onset* and *duration* can be used to specify when the symptom should start (if not immediately) and the period for which an onset acute symptom should remain (if not indefinitely).

The *SymptomManager* module can also spuriously impose symptoms itself that are not caused by a particular disease module. This is to represent symptoms caused by diseases that are not explicitly modelled and to capture inaccurate reporting and spurious presentation. The rate of doing so will be calibrated to match the frequency of persons presenting with symptoms not caused by a disease in the model.

1. <https://onlinelibrary.wiley.com/doi/abs/10.1111/tmi.13499> and https://www.ajol.info/index.php/mmj/article/view/202965 [↑](#footnote-ref-1)