The Standards for the Reporting of Diagnostic Accuracy (STARD) statement, which was recently updated to the STARD2015 statement, was developed to encourage complete and transparent reporting of test accuracy studies. Although STARD principles apply broadly, the checklist is limited to studies designed to evaluate the accuracy of tests when the disease status is determined from a perfect reference procedure or an imperfect one with known measures of test accuracy. However, a reference standard does not always exist, especially in the case of infectious diseases with a long latent period. In such cases, a valid alternative to classical test evaluation involves the use of latent class models that do not require a priori knowledge of disease status. Latent class models have been successfully implemented in a Bayesian framework for over 20 years. The objective of this work was to identify the STARD items that require modification and develop a modified version of STARD for studies that use Bayesian latent class analysis to estimate diagnostic test accuracy in the absence of a reference standard. Examples and elaborations for each of the modified items are provided. The new guidelines, termed STARD-BLCM (Standards for Reporting of Diagnostic accuracy studies that use Bayesian Latent Class Models), will facilitate improved quality of reporting on the design, conduct and results of diagnostic accuracy studies that use Bayesian latent class models.

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