

Fisher scoring algorithm is unable to produce acceptable estimates

The message

The Fisher scoring algorithm is unable to produce acceptable estimates of the variance-covariance components. It is possible that the model you have fitted is too complex for the data at hand

is only applicable to the non-unrestricted models available with HMLM and HMLM2. The unrestricted iterations use EM as an estimation method, and therefore cannot iterate to impossible (i.e. negative) variances. The other types of iterations use a Fisher scoring method, and can arrive at a solution outside the parameter space. The programs will attempt to control this problem, but only up to a point, after which it will stop and produce the message given above. The cause of this is usually an element of the random effect variance-covariance matrix (see the D matrix) being very close to 0. In the HMLM/HMLM2 case, though, it could also be one of the other "extra" parameters. This can also happen in Laplace estimation.