AIC and BIC for modelling with complex survey data

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Model selection criteria such as AIC and BIC are widely used in applied statistics. In recent years there has been a huge increase in modelling data from large complex surveys, and a resulting demand for versions of AIC and BIC that are valid under complex sampling. In this paper we show how both criteria can be modified to handle complex samples. We illustrate with two examples, the first using data from NHANES and the second, data from a case-control study.