INTRODUCTION: Despite recent interest and investments in improving neonatal health in low-resource settings, there are few standard survey questions measuring neonatal interventions, and no consensus as to the appropriate reference period for such questions. The objective of this study was to assess the effect of different reference periods on newborn coverage indicators using data from two household surveys.

METHODS: Household surveys were conducted in Burkina Faso in 2010 and Ethiopia in 2013, sampling 18,000 and 12,000 households, respectively. Both surveys included questions about newborn care practices and careseeking. For each survey, newborn coverage indicators were estimated using both a 1–2 year reference period and a one month reference period, and the resulting point estimates and confidence intervals were compared. In addition, the proportion of ‘don’t know’ responses for each indicator was regressed on length of recall, and coverage indicators were regressed on the number of months of recall to assess whether responses varied systematically with increasing recall.

RESULTS: In both countries, coverage indicators calculated using a one month and a 1–2 year reference period were not significantly different, except for initiation of breastfeeding within one hour of birth and careseeking in Burkina Faso. In addition, in Burkina Faso, the number of months of recall was positively associated with careseeking for neonatal morbidity (aRR = 1.06, 95% CI 1.01–1.10); in Ethiopia we saw no such association. The length of the recall period was not associated with the proportion of ‘don’t know’ responses for most newborn coverage indicators.

CONCLUSIONS: Using a longer reference period for newborn coverage survey questions, up to at least two years, does not significantly change point estimates for most newborn coverage indicators at population level, and greatly improves the precision of these estimates. A one to two year reference period would therefore be justified for a newborn survey module.