

## Annex 4

### Table of sampling errors for selected variables (paragraph 6.2)

**General notes:** Description of the calculation of the standard errors and design effects. If outliers received special treatment in the estimation (e.g. if they were excluded from the estimation), is to be mentioned clearly in the description. Provision of additional comments regarding sampling errors and measures undertaken to mitigate them.

Indicator/ sub-indicator (variable(s) from which the indicator is derived)	Number of respondents - <i>n</i> (unweighted)	Estimated proportion - <i>p</i> (weighted)	Standard error - <i>SE</i> (with respect of sampling plan)	95% confidence interval: lower   upper border	Design effect <i>deff</i> (if applicable/ available)
Respondents aged 15+ in good or very good health (HS1)					
All	10065	0.712	0.003	0.706 0.719	
Women	5195	0.694	0.005	0.685 0.704	
Men	4870	0.732	0.005	0.722 0.741	
Respondents aged 15+ with longstanding illness or health problem (HS2)					
All	5518	0.377	0,004	0,369 0.384	
Women	3051	0.395	0.006	0.384 0.406	
Men	2467	0.357	0.005	0.347 0.367	
Respondents aged 15+ that were severely limited in activities people usually do because of health problems for at least past 6 months (HS3)					
All	1279	0.090	0.002	0.086 0.094	
Women	700	0.094	0.003	0.088 0.100	
Men	579	0.086	0.003	0.079 0.092	
Respondents aged 15+ having been hospitalized in the past 12 months (HO1)					

All	1492	0.104	0.003	0.099 0.110	
Women	838	0.112	0.004	0.105 0.119	
Men	654	0.096	0.004	0.089 0.103	
Respondents aged 18+ who are obese ( <b>BMI</b> > = <b>30</b> , where BMI = BM2 in kg / (BM1 in m * BM1 in m)					
All	2049	0.144	0.003	0.138 0.150	
Women	1139	0.151	0.004	0.143 0.159	
Men	910	0.136	0.004	0.128 0.144	
Comments related to the table	<p>Variance has been calculated using an analytical formula taking into account the sampling design :</p> <ul style="list-style-type: none"> <li>- The primary unit selection thanks to a balanced random sampling design, using Deville-Tillé variance formula (Deville, J.-C., Tillé, Y., Variance approximation under balanced sampling, Journal of Statistical Planning and inference, n°128, 2005);</li> <li>- The selection of individuals inside each primary unit, using a classical stratified random sampling formula ;</li> <li>- The selection of respondent individuals among the initial sample, using the hypothesis that nonresponse corresponds to a stage of poisson random sampling ;</li> <li>- The calibration applied to obtain the final weights, using the residuals technique proposed by Deville and Särndal (Deville, J.-C., Särndal, C.-E., Calibration estimators in survey sampling, Journal of the American Statistical Association, vol.87 n°418, 1992).</li> </ul> <p>The formulas for each sampling stage were combined to obtain an unbiased estimate of the estimators' variance using the Rao formula (Rao, J.-N.-K., Unbiased variance estimation for multistage design, Sankhya, C n°37, 1975).</p> <p>The formula obtained can be applied to estimate the variance of any estimator of the total of a survey variable. To apply this formula to the estimators of other parameters, such as means or ratios, we use the classical linearization technique (Deville, J.-C., Variance estimation for complex statistics and estimators: linearization and residual techniques, Survey Methodology, vol.25 n°2, 1999 and Demnati, A., Rao, J.N.K., Linearization variance estimators for model parameters from complex survey data, Survey Methodology, vol.36 n°2, 2010).</p> <p>Variance calculation was implemented in R using the Gustave package (<a href="https://cran.r-project.org/web/packages/gustave/index.html">https://cran.r-project.org/web/packages/gustave/index.html</a> )</p>				