**Additional file 1:**

*Study designs for the malaria survey data during 2007-2015*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Month/Year of Study** | **Area(s)** | **Design and Context** | **Sampling design** | **Sample Size** |
| April 2007 | Whole HDSS area | HDSS | Systematic Random Sampling | 1270 |
| April 2008 | Whole HDSS area | HDSS | Systematic random sampling | 1039 |
| April 2009 | Whole HDSS area | HDSS | Cluster randomization (cluster unit = village) Villages selected by random sampling proportional to size | 2508 |
| April 2010 | Whole HDSS area | HDSS | Systematic random sampling | 5243 |
| June-July 2011 | Whole HDSS area | HDSS | Systematic random sampling | 2091 |
| June-July 2012 | Whole HDSS area | HDSS | Systematic random sampling | 2719 |
| June-July 2013 | Whole HDSS area | HDSS | Systematic random sampling | 2358 |
| 2014 | Whole HDSS area | HDSS | Systematic random sampling | 1934 |
| 2015 | Whole HDSS area | HDSS | Systematic random sampling | 1756 |