```
/*******************************************************************************
* Malaria early morbidity and mortality                                       *
* Risk of Admission as inpatient within 14 days of presentation - 9 December 2014   *
* - first run do files '1a...' (Setup) and '1b...' (stvary diagnostics)        *
*******************************************************************************/
```

*Set up log and working directory
```
capture log close
version 13.1
set linesize 100
set more off
cd "C:\Users\Carl\Google Drive\MPH\Projects\Malaria project\Data\results"
loc today = c(current_date)
log using "malariaproject_log_`today'.txt", append text
```

*local macro to establish method of Cox model ties handling
```
loc ties efron
```

* prepare folder for results
```
local T = c(current_time)
local T = subinstr("`T'",":","_",.)
mkdir "`ties' `today' `T'"
cd "`ties' `today' `T'"
mkdir figures
cd figures
mkdir PH
cd ..
```

*timer Start

```
timer clear 1
timer on 1
```

*** Admission
*Logistic regression
```
    *m1a
    logistic ip i.SpeciesX i.Ethnic ib4.AGR4 i.sexPreg, vce(cluster hrn)
    estimates store M1a_OR_v2
    /* store model for later retrieval */
    estimates save M1a_OR_v2
    linktest

    *m1b
    logistic ip i.SpeciesX i.Ethnic ib4.AGR4 i.sexPreg i.whiteCat, vce(cluster hrn)
    estimates store M1b_OR                                              /* store
    model for later retrieval */
    estimates save M1b_OR
    linktest

    * *M1a and M1b lrtest: Doesn't work - uneven observation duh
    * lrtest M1a_OR M1b_OR
```

*Cox PH regression
```
    stset AdmFU15, fail(AdmNext14) id(obsno)
```

*m2a: risk of admission within 15 days in those who were not admitted immediately, and on oral or dhp

```stata
stcox i.SpeciesX ib4.AGR4 i.Ethnic i.sexPreg i.oral_v_dhp if ip==0, cluster(hrn) efron
estimates store M2a_HR                                    /* store model for later retrieval */
estimates save M2a_HR
linktest, cluster(hrn) efron
```

*m2b: as above with wcc, limited to those with laboratory data

```stata
stcox i.SpeciesX ib4.AGR4 i.Ethnic i.sexPreg i.oral_v_dhp i.whiteCat if ip==0, cluster(hrn) efron
estimates store M2b_HR                                    /* store model for later retrieval */
estimates save M2b_HR
linktest, cluster(hrn) efron
```

* lrtest M2a_HR M2b_HR

*Mann-Whitney U-test

```stata
ranksum MalPres, by(oral_v_dhp)
ranksum MalPres, by(oral_v_dhp) porder
median MalPres, by(oral_v_dhp) exact
```

***Death

```stata
stset DiedFU15, fail(DiedNext14) id(obsno)
```

*m3a: risk of death by day 15 in those who were not initially admitted, including oral / dhp first treatment

```stata
stcox i.SpeciesX ib4.AGR4 i.Ethnic i.sexPreg i.oral_v_dhp if ip==0, cluster(hrn) efron
estimates store M3a_HR                                    /* store model for later retrieval */
estimates save  M3a_HR
linktest, cluster(hrn) efron
```

*m3b: with WBC count normality

```stata
stcox i.SpeciesX ib4.AGR4 i.Ethnic i.sexPreg i.oral_v_dhp i.whiteCat if ip==0, cluster(hrn) efron
estimates store M3b_HR                                    /* store model for later retrieval */
estimates save  M3b_HR
linktest, cluster(hrn) efron
```

* m4a: risk of death by day 15 limited to those who were admitted immediately & rx'd IV treatment first

```stata
stcox i.SpeciesX ib4.AGR4_4b i.Ethnic i.sexPreg i.ivArt if ip==1, cluster(hrn) efron
estimates store M4a_HR                                    /* store model for later retrieval */
estimates save M4a_HR
linktest, cluster(hrn) efron
```

*m4b: with WBC count normality

```stata
stcox i.SpeciesX ib4.AGR4 i.Ethnic i.sexPreg i.ivArt i.whiteCat if ip==1, cluster(hrn)
```

```
efron
estimates store M4b_HR                                                   /* store
model for later retrieval */
estimates save M4b_HR
linktest, cluster(hrn) efron

timer off 1
timer list 1
```