stvary — Report variables that vary over time

Syntax

```
stvary [varlist] [if] [in] [, noshow]
```

You must stset your data before using stvary; see [ST] stset.

by is allowed; see [D] by.

fweights, iweights, and pweights may be specified using stset; see [ST] stset.

Menu

Statistics > Survival analysis > Setup and utilities > Report variables that vary over time

Description

`stvary` is for use with multiple-record datasets, for which `id()` has been `stset`. It reports whether values of variables within subject vary over time and reports their pattern of missing values. Although `stvary` is intended for use with multiple-record st data, it may be used with single-record data as well, but this produces little useful information.

`stvary` ignores weights, even if you have set them. `stvary` summarizes the variables in the computer or data sense of the word.

Option

```
Main noshow prevents stvary from showing the key st variables. This option is seldom used because most people type stset, show or stset, noshow to set whether they want to see these variables mentioned at the top of the output of every st command; see [ST] stset.
```

Remarks and examples

Consider a multiple-record dataset. A subject’s sex, presumably, does not change, but his or her age might. `stvary` allows you to verify that values vary in the way that you expect:
use http://www.stata-press.com/data/r13/stan3
(Heart transplant data)

. stvary

failure _d: died
analysis time _t: t1
id: id

subjects for whom the variable is
never always sometimes
constant varying missing missing missing

<table>
<thead>
<tr>
<th>variable</th>
<th>constant</th>
<th>varying</th>
<th>never missing</th>
<th>always missing</th>
<th>sometimes missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>year</td>
<td>103</td>
<td>0</td>
<td>103</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>age</td>
<td>103</td>
<td>0</td>
<td>103</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>stime</td>
<td>103</td>
<td>0</td>
<td>103</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>surgery</td>
<td>103</td>
<td>0</td>
<td>103</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>transplant</td>
<td>103</td>
<td>0</td>
<td>103</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>wait</td>
<td>103</td>
<td>0</td>
<td>103</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>posttran</td>
<td>34</td>
<td>69</td>
<td>103</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

That 103 values for year are “constant” does not mean that year itself is a constant—it means merely that, for each subject, the value of year does not change across the records. Whether the values of year vary across subjects is still an open question.

Now look at the bottom of the table: posttran is constant over time for 34 subjects and varies for the remaining 69.

Below we have another dataset, and we will examine just two of the variables:

. use http://www.stata-press.com/data/r13/stvaryex

. stvary sex drug

subjects for whom the variable is
never always sometimes
constant varying missing missing missing

<table>
<thead>
<tr>
<th>variable</th>
<th>constant</th>
<th>varying</th>
<th>never missing</th>
<th>always missing</th>
<th>sometimes missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>sex</td>
<td>119</td>
<td>1</td>
<td>119</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>drug</td>
<td>121</td>
<td>2</td>
<td>123</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Clearly, there are errors in the sex variable; for 119 of the subjects, sex does not change over time, but for one, it does. Also we see that we do not know the sex of three of the patients, but for another, we sometimes know it and sometimes do not. The latter must be a simple data-construction error. As for drug, we see that for two of our patients, the drug administered varied over time. Perhaps this is an error, or perhaps those two patients were treated differently from all the rest.

Stored results

stvary stores the following in r():

Scalars

r(cons)    number of subjects for whom variable is constant when not missing
r(varies)  number of subjects for whom nonmissing values vary
r(never)   number of subjects for whom variable is never missing
r(always)  number of subjects for whom variable is always missing
r(miss)    number of subjects for whom variable is sometimes missing
Reference


Also see

[ST] `stdescribe` — Describe survival-time data

[ST] `stfill` — Fill in by carrying forward values of covariates

[ST] `stset` — Declare data to be survival-time data