**Syntax**

\[ \texttt{stir exposedvar [if] [in] [, options]} \]

**options**

- **Main**
  - \texttt{strata(varname)}
    - stratify on \texttt{varname}
  - \texttt{noshow}
    - do not show \texttt{st} setting information

- **Options**
  - \texttt{ird}
    - report incidence-rate difference rather than ratio
  - \texttt{estandard}
    - combine external weights with within-stratum statistics
  - \texttt{istandard}
    - combine internal weights with within-stratum statistics
  - \texttt{standard(varname)}
    - combine user-specified weights with within-stratum statistics
  - \texttt{pool}
    - display pooled estimate
  - \texttt{nocrude}
    - do not display crude estimate
  - \texttt{nohom}
    - do not display homogeneity test
  - \texttt{tb}
    - calculate test-based confidence intervals
  - \texttt{level(#)}
    - set confidence level; default is \texttt{level(95)}

Options except \texttt{noshow}, \texttt{tb}, and \texttt{level(#)} are relevant only if \texttt{strata()} is specified.

You must \texttt{stset} your data before using \texttt{stir}; see \texttt{[ST] stset}.

by is allowed; see \texttt{[D] by}.

\texttt{fweights} and \texttt{iweights} may be specified using \texttt{stset}; see \texttt{[ST] stset}. \texttt{stir} may not be used with \texttt{pweight}ed data.

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**Menu**

Statistics > Survival analysis > Summary statistics, tests, and tables > Report incidence-rate comparison

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**Description**

\texttt{stir} reports point estimates and confidence intervals for the incidence-rate ratio and difference.

\texttt{stir} is an interface to the \texttt{ir} command; see \texttt{[ST] epitab}.

By the logic of \texttt{ir}, \texttt{exposedvar} should be a 0/1 variable, with 0 meaning unexposed and 1 meaning exposed. \texttt{stir}, however, allows any two-valued coding and even allows \texttt{exposedvar} to be a string variable.

\texttt{stir} may not be used with \texttt{pweight}ed data.

\texttt{stir} can be used with single- or multiple-record or single- or multiple-failure \texttt{st} data.
<table>
<thead>
<tr>
<th>group</th>
<th>Exposed</th>
<th>Unexposed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure</td>
<td>19</td>
<td>17</td>
<td>36</td>
</tr>
<tr>
<td>Time</td>
<td>5023</td>
<td>4095</td>
<td>9118</td>
</tr>
</tbody>
</table>

Incidence rate

<table>
<thead>
<tr>
<th>Point estimate</th>
<th>[95% Conf. Interval]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inc. rate diff.</td>
<td>-.0003688</td>
</tr>
<tr>
<td>Inc. rate ratio</td>
<td>.9111616</td>
</tr>
<tr>
<td>Prev. frac. ex.</td>
<td>.0888384</td>
</tr>
<tr>
<td>Prev. frac. pop</td>
<td>.04894</td>
</tr>
</tbody>
</table>

(midp) Pr(k<=19) = 0.3900 (exact)
(midp) 2*Pr(k<=19) = 0.7799 (exact)
Stored results

`stir` stores the following in `r()`:

Scalars

- `r(p)`  one-sided $p$-value
- `r(ird)` incidence-rate difference
- `r(lb_ird)` lower bound of CI for `ird`
- `r(ub_ird)` upper bound of CI for `ird`
- `r(irr)` incidence-rate ratio
- `r(lb_irr)` lower bound of CI for `irr`
- `r(ub_irr)` upper bound of CI for `irr`
- `r(afe)` attributable (prev.) fraction among exposed
- `r(lb_afe)` lower bound of CI for `afe`
- `r(ub_afe)` upper bound of CI for `afe`
- `r(afp)` attributable fraction for the population
- `r(chi2_mh)` Mantel–Haenszel homogeneity $\chi^2$
- `r(chi2_p)` pooled homogeneity $\chi^2$
- `r(df)` degrees of freedom

Methods and formulas

`stir` simply accumulates numbers of failures and time at risk by exposed and unexposed (by strata, if necessary) and passes the calculation to `ir`; see `[ST] epitab`.

Reference


Also see

`[ST] epitab` — Tables for epidemiologists

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

`[ST] stsum` — Summarize survival-time data