

## Nightingale

After witnessing deplorable sanitary conditions in the Crimea, she wrote several influential texts (Nightingale, 1858, 1859), including polar-area graphs (sometimes called "Coxcombs" or rose diagrams), showing the number of deaths in the Crimean from battle compared to disease or preventable causes that could be reduced by better battlefield nursing care.

Her *Diagram of the Causes of Mortality in the Army in the East* showed that most of the British soldiers who died during the Crimean War died of sickness rather than of wounds or other causes. It also showed that the death rate was higher in the first year of the war, before a Sanitary Commission arrived in March 1855 to improve hygiene in the camps and hospitals.

## Usage

`data(Nightingale)`

## Format

A data frame with 24 observations on the following 10 variables.

Date a Date, composed as `as.Date(paste(Year, Month, 1, sep='-'), "%Y-%b-%d")` Month Month of the Crimean War, an ordered factor

Year Year of the Crimean War

Army Estimated average monthly strength of the British army

Disease Number of deaths from preventable or mitagable zymotic diseases

Wounds Number of deaths directly from battle wounds

Other Number of deaths from other causes

Disease.rate Annual rate of deaths from preventable or mitagable zymotic diseases, per 1000

Wounds.rate Annual rate of deaths directly from battle wounds, per 1000

Other.rate Annual rate of deaths from other causes, per 1000 Details

For a given cause of death, D, annual rates per 1000 are calculated as  $12 * 1000 * D / \text{Army}$ , rounded to 1 decimal.

The two panels of Nightingale's Coxcomb correspond to dates before and after March 1855

## Source

The data were obtained from:

Pearson, M. and Short, I. (2007). *Understanding Uncertainty: Mathematics of the Coxcomb.*

<http://understandinguncertainty.org/node/214>