Package ‘memapp’

September 10, 2020

Version 2.14

Date 2020-09-09

Title The Moving Epidemic Method Web Application

Description The Moving Epidemic Method, created by T Vega and JE Lozano (2012, 2015) <doi:10.1111/j.1750-2659.2012.00422.x>, <doi:10.1111/irv.12330>, allows the weekly assessment of the epidemic and intensity status to help in routine respiratory infections surveillance in health systems. Allows the comparison of different epidemic indicators, timing and shape with past epidemics and across different regions or countries with different surveillance systems. Also, it gives a measure of the performance of the method in terms of sensitivity and specificity of the alert week. ‘memapp’ is a web application created in the Shiny framework for the ‘mem’ R package.

Depends R (>= 3.4.0)

Imports shiny, shinystudio, shinydashboard, shinyWidgets, shinyBS, shinyjs, RColorBrewer, tidyR, dplyr, openxlsx, foreign, haven, readxl, stringr, stringi, DT, RODBC, formatable, ggplot2, plotly, mem (>= 2.15)

Suggests magick, animation

License GPL (>= 2)

URL https://github.com/lozalojo/memapp

BugReports https://github.com/lozalojo/memapp/issues

Encoding UTF-8

RoxygenNote 7.1.1

NeedsCompilation no

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Repository CRAN

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Description

This data set contains *Influenza Like Illness* (ILI) rates, in cases per 100,000 inhabitants collected by the *Influenza Surveillance Programme* of the *Castilla y Leon Health Sentinel Network* (CyLHSN) from 2001 to 2008.

Usage

data(flucyl)

Format

A data frame with 33 observations on 8 variables. Each observation is one surveillance week, and each variable is an influenza season.

- **2001/2002** a numeric vector - 2001/2002 rates per 100,000 inhabitants.
- **2004/2005** a numeric vector - 2004/2005 rates per 100,000 inhabitants.
- **2006/2007** a numeric vector - 2006/2007 rates per 100,000 inhabitants.
- **2007/2008** a numeric vector - 2007/2008 rates per 100,000 inhabitants.
- **2008/2009** a numeric vector - 2008/2009 rates per 100,000 inhabitants.

Details

The *Castilla y Leon Health Sentinel Network* is a spanish regional influenza surveillance system based upon volunteer health professionals. The *Influenza Surveillance Programme* consists on a random sample of general practitioners (covering 30,000 population) which collect ILI cases weekly from 40th week (October) to 20th week (May) of the following year to provide estimations of the ILI weekly rate for the entire region.


Source

References

Castilla y Leon Health Sentinel Network Reports (Informes de la Red Centinela Sanitaria de Castilla y Leon).
Influenza Surveillance Programme (Programa de vigilancia de la gripe).
https://www.saludcastillayleon.es/profesionales/es/centinelas

Examples

```r
data(flucyl)
plot(flucyl[,1], type="l")
```

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**flucylraw**

*Castilla y Leon influenza standardised rates*

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**Description**

This data set contains *Influenza Like Illness* (ILI) rates, in cases per 100,000 inhabitants collected by the *Influenza Surveillance Programme* of the *Castilla y Leon Health Sentinel Network* (CyLHSN) from 2001 to 2008.

**Usage**

```r
data(flucylraw)
```

**Format**

A data frame with 267 observations on 2 variables. Each observation is one surveillance week and rate,

- **year** - a numeric vector - year.
- **week** - a numeric vector - week.
- **rates** - a numeric vector - standardised rates per 100,000 inhabitants.

**Details**

The *Castilla y Leon Health Sentinel Network* is a Spanish regional influenza surveillance system based upon volunteer health professionals. The *Influenza Surveillance Programme* consists of a random sample of general practitioners (covering 30,000 population) which collect ILI cases weekly from 40th week (October) to 20th week (May) of the following year to provide estimations of the ILI weekly rate for the entire region.


**Source**

References

Castilla y Leon Health Sentinel Network Reports (Informes de la Red Centinela Sanitaria de Castilla y Leon).
Influenza Surveillance Programme (Programa de vigilancia de la gripe).
https://www.saludcastillayleon.es/profesionales/es/centinelas

Examples

data(flucylraw)
plot(flucylraw$rates,type="l")

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**runmemapp**: The Moving Epidemics Method Shiny Web Application

Description

Function `runmemapp` is used to start the memapp Shiny Web Application.
memapp is a web application created to serve as a graphical user interface for the R mem library. It was created using Shiny, a web application framework for R. This application uses the development version of the mem R library.

Usage

`runmemapp(launch.browser = TRUE, ...)`

Arguments

- `launch.browser` whether if you want to launch the app in an external browser.
- `...` other parameters passed to `shiny::runApp`.

Details

Input data is a data frame containing rates that represent historical influenza surveillance data. It can start and end at any given week (typically at week 40th), and rates can be expressed as per 100,000 inhabitants (or per consultations, if population is not available) or any other scale. Parameters sent to the mem R library are set in the application itself.

Author(s)

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References


Lozano, Jose E. mem R package: First version of the MEM R library [Internet]. Valladolid, Spain: Foundation Institute of Health Sciences Studies of Castilla y Leon; 2014. Available from: https://cran.r-project.org/web/packages/mem/index.html

Lozano, Jose E. lozalojo/mem: Second release of the MEM R library. Zenodo [Internet]. [cited 2017 Feb 1]; Available from: https://zenodo.org/record/165983

Examples

library("memapp")
if (interactive()) runmemapp(launch.browser = TRUE)
Index

* datasets
  flucyl, 2
  flucylraw, 3
* influenza
  runmemapp, 4

flucyl, 2
flucylraw, 3
runmemapp, 4