



e-Rum2020

VIRTUAL CONFERENCE

17/20 JUNE
MILANO

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05_PrescRiptions

A UNIFIED APPROACH FOR WRITING AUTOMATIC REPORTS

Parameterization and Generalization of R- Markdown


Render functions + =

Render functions can be implemented in **R-packages**, with the following **Advantages**

- Retrieve information with custom functions
- Develop analytical functions outside of render
- Render recalls given functions, thus simplifying
- Better version control and documentation
- Fast development with *roxygen*

The Project

[PrescRiptions gitbook](#)

 PrescRiptions Project

INTRODUCTION

AUTHORS

OBJECTIVES

DATA SOURCES

- Practice Level Prescription Data >
- British National Formulary (BNF) Codes >
- Patients Registered at a GP Practice (demog) >
- Quality Outcome Framework (QOF) for individual conditions >
- Data Map

DATA REPOSITORY

- PrescRiptionsData on Github

R PACKAGE

- PrescRiptions R-Package
- Functions >
- Usage
- Acknowledgments

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INTRODUCTION

Welcome to the PrescRiptions Project!

Welcome to **PrescRiptions project** presentation! This is a short, informative guide to present you the project, its present and future objectives, functionalities and sources.

This guide is primarily written for the **e-rum2020** participants, but is targeted for anyone who is willing to use the Package.

PRp is an ongoing project carried by Cristina Muschitiello and Niccolò Stamboglis, Data Scientists aiming at studying **NHS Presentation level data**.

The NHS presentation level data is an important resource available to healthcare practitioners and researchers to analyse drugs prescriptions in the **English National Health Service (NHS)**.

Drugs provision is an important element of **healthcare costs**. Drugs see an increasing **annual inflation**. **Monitoring** and understanding the drivers of drug's costs is important for **budgetary purposes**. Also, in specific area such as **antibiotic provision**, monitoring the amount of items provided might be useful as antibiotics prescription is linked to health threats such as **antibiotic resistance**.

Also, with a repository of monthly data of practice-level prescription made available from **September 2011**, presentation level data is an important **resource** to learn and practice with analytical and data-related projects.

Presentation level data is also made available by **OpenPrescribing (OP)**, an free-to-use website developed by **EBM DataLab, Department of Primary Care Health Sciences**, University of Oxford. OP makes available to the public 5 years of prescription data. The **PrescRiptions** project does not aim to substitute to OpenPrescribing. On the contrary, PRp aims at making this resource available to researchers via **R**.

For more information see <https://openprescribing.net/>.

Objectives

- **Analysis** analyse English NHS presentation level data to identify specific prescription patterns operating at individual practice level and for specific prescription class.
- **Dissemination** make the resources available to the wider research community via R.
- **Education** use the developed material for R education purposes.

Data

→ Practice level Data:

- ◆ Prescription data
- ◆ GP Addresses
- ◆ Chemical substance names

→ **British National Formulary:** allows to organise prescriptions in clusters (e.g. antibiotics)

→ **Practice demographics:** registered patients by age and gender

→ **Quality Outcome Frameworks (QOF):** indicators related to the management of common conditions, public health concerns and preventative services at the practice level

Key functions

monthlyDataImport() -> for monthly data download

generateSummaries() -> regional and BNF code summaries

gpSummaries() -> GP-level summaries

plpdDemogBridge() -> used to match prescription and demographical data

renderMonthlyReport() -> ... and, of course, a ***render function*** for a ***monthly report!***

Package



PrescRiptions

muschitiello / PrescRiptions

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Aggregations and Reports of Practice Level Prescribing Data in England Edit

Manage topics


52 commits 1 branch 0 packages 1 release 1 contributor

Branch: master New pull request

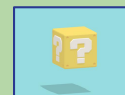
Create new file Upload files Find file Clone or download

muschitiello v0.2.5		Latest commit 9a0f4c8 yesterday
R	v0.2.5	yesterday
inst/rmd	v0.2.5	yesterday
man	v0.2.4 SAMPLE configuration	yesterday
.Rbuildignore	reorganize gitignore	3 months ago
.gitignore	reorganize gitignore	3 months ago
DESCRIPTION	v0.2.5	yesterday
NAMESPACE	automatic recognition of sample data added in report	6 days ago
PrescRiptions.Rproj	reorganize gitignore	3 months ago
README.md	readme creation	3 months ago
config.yml	import and downloaf functions updated	last month

Your turn: Exercise 12

 E12_PrescRiptions.R

Play with package Functions and produce different reports using the function `renderMonthlyReport()`.



Time: 5 min

Questions



Next up: conclusions



Source: giphy.com