

# PHIRI Federated Analysis Application (Docker) User Interface

**PHIRI**  
Population Health Information  
Research Infrastructure

**USE CASE A**  
Vulnerable populations  
Has the COVID19 pandemic changed existing patterns of non-COVID-19 health care utilisation and mortality for vulnerable populations within and between countries?  
[CHECK THE DATA MODEL HERE!](#)

**USE CASE B**  
Delayed treatment in breast cancer  
Has there been any increase in surgical and/or co-adjuvant (i.e. radiotherapy, chemotherapy, immunotherapy) treatments delay in eligible women diagnosed of breast cancer, as a consequence of the COVID19 crisis?  
[CHECK THE DATA MODEL HERE!](#)

**USE CASE C**  
Perinatal health  
Focus on the indirect effects of the COVID-19 pandemic on maternal and newborn health with a focus on potential inequalities regarding non-deferrable healthcare needs and risks of adverse perinatal outcomes due to stress and social deprivation.  
[CHECK THE DATA MODEL HERE!](#)

**USE CASE D**  
Mental health  
Has there been any increase in individuals with mental health risk factors or mental disease, as a consequence of the COVID19 crisis? This case study will measure changes in population mental health and healthcare utilisation associated with the COVID-19 pandemic.  
[CHECK THE DATA MODEL HERE!](#)

**COVID-19**  
Demonstration pilot  
Evolution of the SARS-CoV-2 pandemic  
[CHECK THE DATA MODEL HERE!](#)

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**USE CASE D**  
**Mental health**  
Has there been any increase in individuals with mental health risk factors or mental disease, as a consequence of the COVID19 crisis? This case study will measure changes in population mental health and healthcare utilisation associated with the COVID-19 pandemic.  
[CHECK THE DATA MODEL HERE!](#)

**Application**

**Data mapping**  
1) Select the Use Case you want to participate in and

**General analysis**  
2) Select the Use Case you want to participate in and launch

datamodel\_vuln....zip ^ Mostrar todo x

# PHIRI Federated Analysis Application (Docker) User Interface



## PHIRI WP7 pilot data model (Synthetic data)

**Description:** Common Data Model for the COVID-19 rapid cycle analysis demonstration pilot (WP7)

### Bibliographic

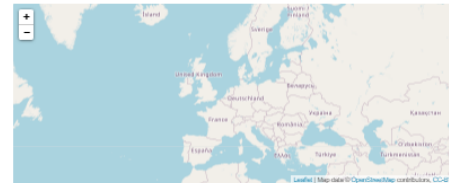
Published	2021-07-30
Keywords	<ul style="list-style-type: none"> <li>COVID-19</li> <li>monitoring</li> <li>healthcare</li> <li>rapid-cycle analytics</li> </ul>
Funder	PHIRI Population Health Information Research Infrastructure
License	CC-BY

### Coverage

#### Temporal

Begin	2019-01-01
End	2021-12-31

#### Spatial



### Attributes

inactive_insurance_dt	date of insured status "inactive" (status "inactive" in insurees database)
reason_inactive_insurance	reason for change of status to "inactive" in the insurees database
care_level_b1	healthcare assistance level (from primary care to ICU admission)
stay_days_m	length of stay (days)
icu_stay_days_m	ICU length of stay
care_top_cd	top healthcare assistance level (from primary care to ICU admission)
severity_index_cd	severity index (i.e. gma)
profcat_cd	professional category of the patient (relevant professions)
cluster_id	public health cluster identification (in case patient is part of a cluster)
viral_syndrome_b1	viral syndrome

### Distribution

File	Format
data_model_pilot_synthetic.csv	Download CSV

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File	Format
data_model_pilot_synthetic.csv	Download CSV



# PHIRI Federated Analysis Application (Docker) User Interface

PHIRI Federated Analysis

- Home
- Data mapping
- General analysis
- Process control
- Outputs retrieval

**Application**

**Data mapping**

1) Select the Use Case you want to participate in and introduce your data for analysis. Data should be extracted from your health information systems following the requirements and specifications of the data model of the use case in which you want to participate.

GO

**General analysis**

2) Select the Use Case you want to participate in and launch the analyses provided by the Use Case coordinators. Analyses scripts are open source and can be audited by anyone.

GO

**Process control**

3) Monitors the operation of each step (i.e. introducing and loading data, performing the analyses, etc.) and stop the process in case of any issue or difficulty is observed during their execution.

GO

**Outputs retrieval**

4) Retrieve your outputs once the analyses have run successfully. Outputs from the analysis may include interactive reports (in HTML format), the DQA report of the data analysed (in HTML format) and aggregated data files to share for the federated analysis for each use case.

GO

**Data quality analysis**

**Data Quality Assessment (DQA)**

This application will produce by default a brief data quality assessment (DQA) of the datasets introduced for analysis by each participant partner. The DQA report can be retrieved in the 'Outputs' menu as a HTML document. The DQA report (see screenshot below) will include basic statistic information on each variable according to the data model required for conducting the analysis in each Use Case for you to check any quality issues with your data.

# PHIRI Federated Analysis Application (Docker)

## User Interface

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GO

### Data quality analysis

#### Data Quality Assessment (DQA)

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age  
Real number (R<sub>+</sub>)

Distinct	55	Minimum	29
Distinct (%)	0.9%	Maximum	86
Missing	0	Zeros	0
Missing (%)	0.0%	Zeros (%)	0.0%
Infinite	0	Negative	0
Infinite (%)	0.0%	Negative (%)	0.0%
Mean	54.99747992	Memory size	49.7 KB

Toggle details

Quantile statistics		Descriptive statistics	
Minimum	29	Standard deviation	7.375344859
5-th percentile	43	Coefficient of variation (CV)	0.1341033202
Q1	50	Kurtosis	0.1584878689
median	55	Mean	54.99747992
Q3	60	Median Absolute Deviation (MAD)	5
95-th percentile	67	Skewness	0.1432223535
Maximum	86	Sum	349179
Range	57	Variance	54.39570883
Interquartile range (IQR)	10	Monotonicity	Not monotonic

# PHIRI Federated Analysis Application (Docker) User Interface

Use case	Number of records	Date of loading	Actions
Delayed ttm breast cancer	19356	2021-06-17 14:07:30	
Perinatal health	0		
Mental health	1000	2021-06-16 11:58:51	
Vulnerable populations (Heart attack and strokes)	0		
Vulnerable populations (Hip and knee replacements)	0		
Vulnerable populations (Severe trauma)	0		

Rows per page: 10 1-6 of 6

### Mapper

**Use case selector**

Use case selector

**Use case requirements**

Please be strict with the coding of the name and extension of the data files to be uploaded for analysis.

**File upload**

# PHIRI Federated Analysis Application (Docker) User Interface

Mental health	1000	2021-06-16 11:58:51	
Vulnerable populations (Heart attack and strokes)	0		
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Rows per page: 10 1-6 of 6

## Mapper

### Use case selector

Delayed ttm breast cancer

### Use case requirements

Please be strict with the coding of the name and extension of the data files to be uploaded for analysis.

### File upload

Select file breast\_cancer\_ttm\_delays\_synthetic\_dataset\_v2.0.csv

Include exploratory data analysis (EDA).

### Number of errors

-

See detail Download log

Load data

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Mental health	1000	2021-06-16 11:58:51	
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[See detail](#) [Download log](#)

[Load data](#)



# PHIRI Federated Analysis Application (Docker) User Interface

The screenshot displays the PHIRI Federated Analysis Application (Docker) User Interface. The interface is divided into several sections:

- Table:** A table with 4 rows and 3 columns. The first row is highlighted in grey. The columns contain: "Mental health", "1000", and "2021-06-16 11:58:51". The other rows are: "Vulnerable populations (Heart attack and strokes)", "0", and a trash icon; "Vulnerable populations (Hip and knee replacements)", "0", and a trash icon; "Vulnerable populations (Severe trauma)", "0", and a trash icon. Below the table is a pagination control: "Rows per page: 10 1-6 of 6".
- Mapper:** A section titled "Mapper" with a sub-section "Use case selector".
- Error Message:** A white modal box with a table containing one row of error information. A green arrow points to this box from the right.

File	Line	Message
aggregated_output_2021-06-17_11_17_39_delayed_ttm_breast_cancer.csv		ERROR - The header does not exist or is not correct.

Below the table is a pagination control: "Rows per page: 10 1-1 of 1". A blue "CLOSE" button is at the bottom left of the modal.
- File upload:** A section titled "File upload" with a "Select file" button and the filename "aggregated\_output\_2021-06-17\_11\_17\_39\_delayed\_ttm\_breast\_cancer.csv". A toggle switch for "Include exploratory data analysis (EDA)" is turned on.
- Number of errors:** A grey box showing "Number of errors" as "1". Below it are "See detail" and "Download log" buttons.
- Load data:** A large yellow button labeled "Load data" at the bottom.

# PHIRI Federated Analysis Application (Docker) User Interface

**General analysis**

Use case selector

Delayed ttm breast cancer

**Description of the analysis**

Has there been any increase in surgical and/or co-adjuvant (i.e. radiotherapy, chemotherapy, immunotherapy) treatments delay in eligible women diagnosed of breast cancer, as a consequence of the COVID19 crisis?

**Analysis**

Please, be aware that this process may take several minutes depending on the Use Case.

Launch analysis

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Process is running

# PHIRI Federated Analysis Application (Docker) User Interface

Active processes			
Name	Start time	Use case	Actions
Analysis	14:34	Delayed ttm breast cancer	⊙

Rows per page: 10 | 1-1 of 1

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Active processes

Name	Start time	Use case	Actions
Analysis	14:34	Delayed ttm breast cancer	⊙

Rows per page: 10 1-1 of 1

Are you sure you want to stop it?

CANCEL STOP

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# PHIRI Federated Analysis Application (Docker) User Interface

The screenshot displays the PHIRI Federated Analysis Application (Docker) User Interface. The interface includes a sidebar with navigation icons (home, upload, bar chart, expand, folder) and a main content area with a 'Reports' table. A green arrow points to the 'aggregated\_output' report in the table.

Name	Date	Time	Use Case	Actions
EDA	2021-06-16	09:38:06	mental_health	📄 🗑️
aggregated_output	2021-06-17	13:13:15	delayed_ttm_breast_cancer	📄 🗑️
report	2021-06-17	13:13:15	delayed_ttm_breast_cancer	📄 🗑️
aggregated_output	2021-06-17	14:36:57	delayed_ttm_breast_cancer	📄 🗑️
report	2021-06-17	14:36:57	delayed_ttm_breast_cancer	📄 🗑️

Rows per page: 10 1-5 of 5 < >



# PHIRI Federated Analysis Application (Docker) User Interface

The screenshot displays the 'Reports' section of the PHIRI application. A table lists several reports, with the first row highlighted in red. A confirmation dialog box is overlaid on the table, asking 'Are you sure you want to delete it?' with 'CANCEL' and 'DELETE' options. A green arrow points to the 'DELETE' button. A red prohibition sign is visible on the right side of the table.

Name	Date	Time	Use Case	Actions
EDA	2021-06-16	09:38:06	mental_health	
aggregated_output	2021-06-17	13:13:15	delayed_ttm_breast_cancer	
report	2021-06-17	13:13:15	delayed_ttm_breast_cancer	
aggregated_output	2021-06-17	14:36:57	delayed_ttm_breast_cancer	
report	2021-06-17	14:36:57	delayed_ttm_breast_cancer	

Are you sure you want to delete it?

[CANCEL](#) [DELETE](#)

# PHIRI Federated Analysis Application (Docker) User Interface

The screenshot displays the 'Reports' section of the PHIRI Federated Analysis Application. A table lists various reports, with the row for 'aggregated\_output' dated 2021-06-17 at 14:36:57 highlighted in green. A green arrow points to the download icon in the 'Actions' column of this row. The browser's address bar at the bottom shows the file path 'aggregated\_out...csv' and 'report\_2021-0...html'.

Name	Date	Time	Use Case	Actions
EDA	2021-06-16	09:38:06	mental_health	Download
aggregated_output	2021-06-17	13:13:15	delayed_ttm_breast_cancer	Download
report	2021-06-17	13:13:15	delayed_ttm_breast_cancer	Download
aggregated_output	2021-06-17	14:36:57	delayed_ttm_breast_cancer	Download
report	2021-06-17	14:36:57	delayed_ttm_breast_cancer	Download

Rows per page: 10 1-5 of 5

aggregated\_out...csv report\_2021-0...html

# PHIRI Federated Analysis Application (Docker)

- Help-Desk
  - Technical/Implementation support:
    - To: [dchichell.iacs@aragon.es](mailto:dchichell.iacs@aragon.es)
    - Cc: [jgonzalezga.iacs@aragon.es](mailto:jgonzalezga.iacs@aragon.es)
  - Domain support:
    - To: [festupinnan.iacs@aragon.es](mailto:festupinnan.iacs@aragon.es)
- Available soon in ZENODO at <https://doi.org/10.5281/zenodo.5729311>





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# Thank you very much for your attention!

