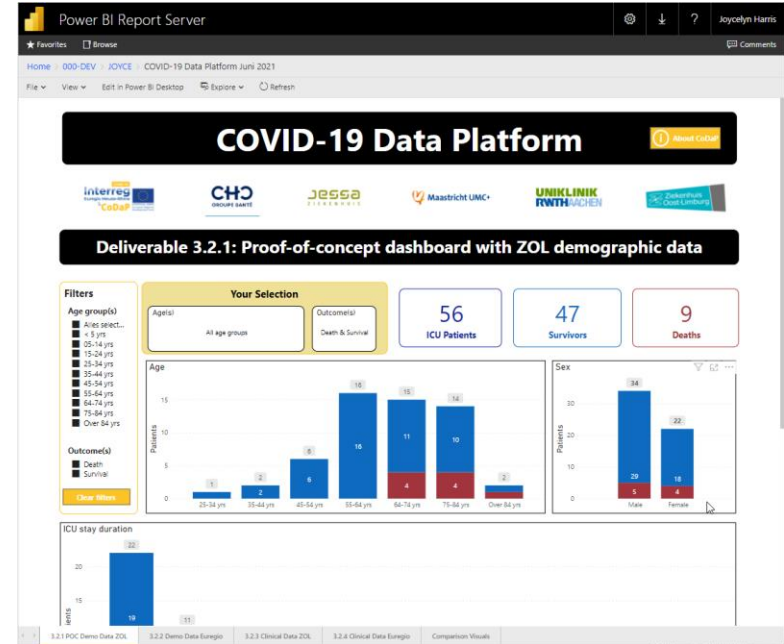


Dashboard Demonstration

Outline

1. Dashboard technology
2. Dashboard (report) pages:
 - Demographic data
 - Clinical data
 - Project communication
 - Direction for future work
 - Technology selection

*Deliverables
3.2.1 to 3.2.4*



Data Pages

Demographic Data pages

- Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data
- Deliverable 3.2.2: Dashboard extended with demographic data of Euregio

Clinical Data pages

- Deliverable 3.2.3: Dashboard extended with clinical data of ZOL
- Deliverable 3.2.4: Dashboard extended with clinical data of Euregio

Project Communication

- CoDaP Information Page

Potential evolution

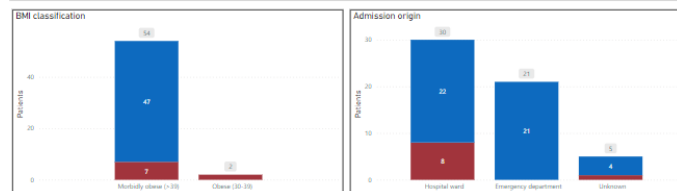
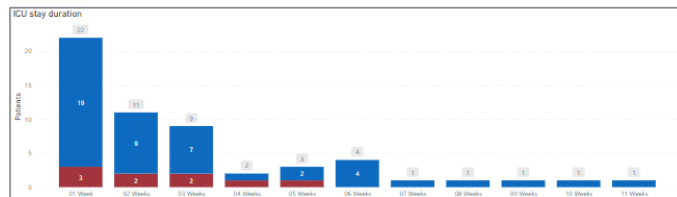
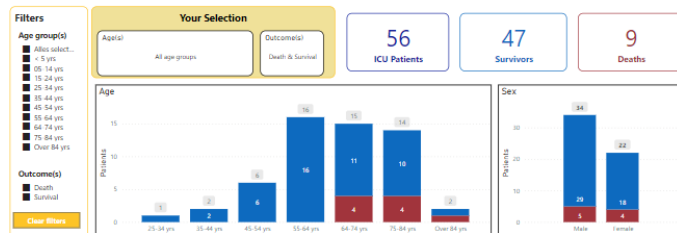
- Comparison visuals

Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data

COVID-19 Data Platform



Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data



- Header
 - Project title and link to CoDaP Information Page
 - Participator's logos
 - Deliverable title
- Data filters:
 - Age groups
 - Outcome (survival or death)
- Interactive visuals:
 - Age
 - ICU stay duration
 - Sex
 - BMI classification
 - Admission origin

Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data

Page Header

Project name

Link to CoDaP
Information Page

COVID-19 Data Platform

 About CoDaP



Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data

Participator's
organisation
logos

Deliverable
name

Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data

Data Filters

Filters

Age group(s)

- ☒ Alles select...
- ☐ < 5 yrs
- ☐ 05-14 yrs
- ☐ 15-24 yrs
- ☐ 25-34 yrs
- ☐ 35-44 yrs
- ☐ 45-54 yrs
- ☐ 55-64 yrs
- ☐ 64-74 yrs
- ☐ 75-84 yrs
- ☐ Over 84 yrs

Outcome(s)

- ☐ Death
- ☐ Survival

Clear filters

Your Selection

Age(s): All age groups

Outcome(s): Death & Survival

56
ICU Patients

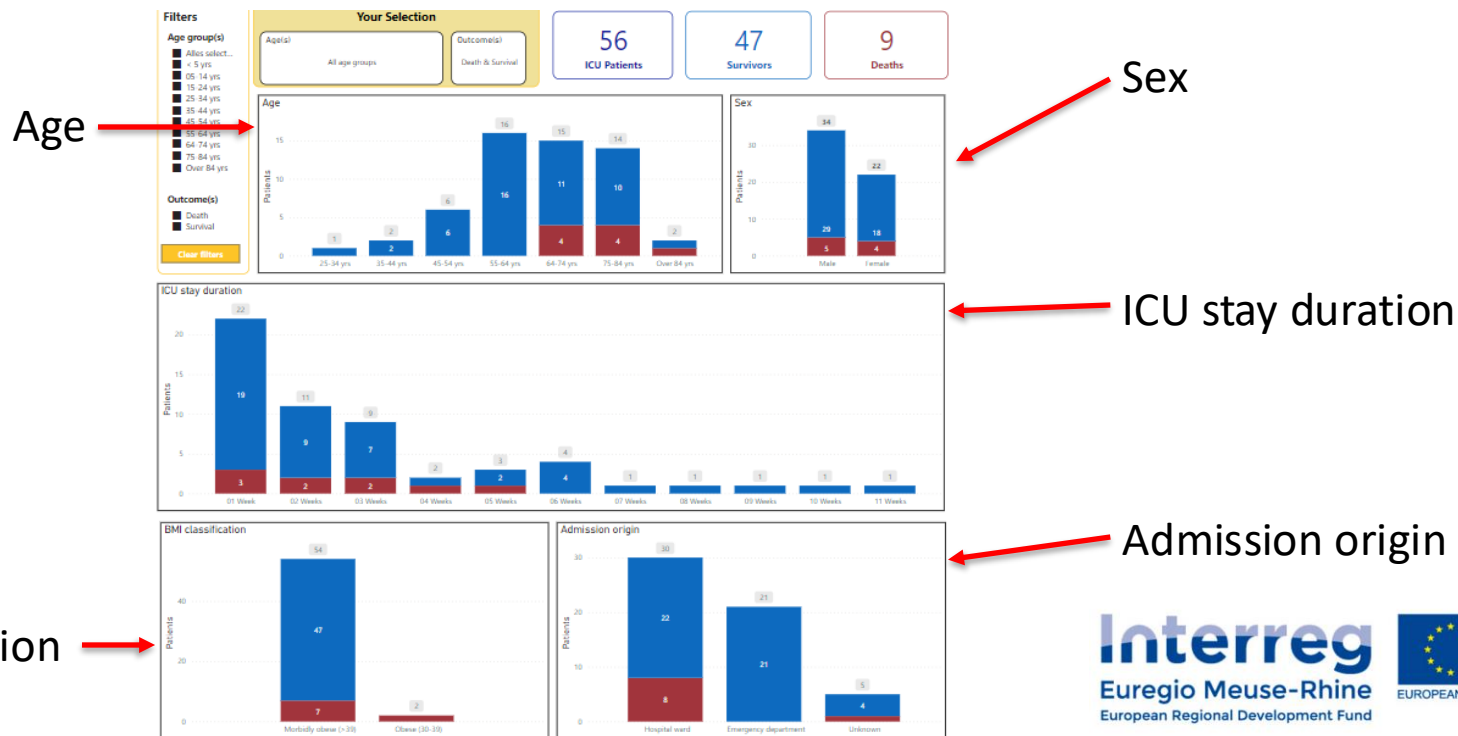
47
Survivors

9
Deaths

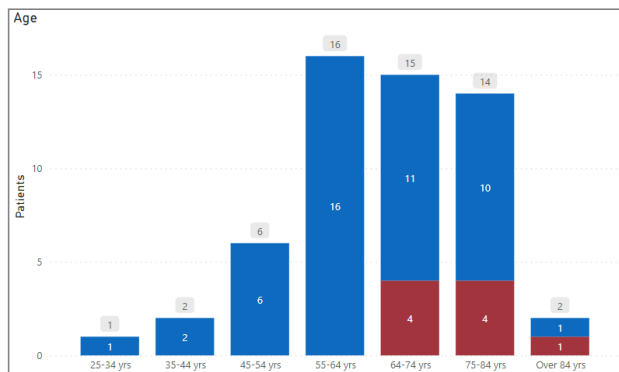
Filters allow viewers to choose a smaller part of a data set and use that subset for viewing or analysis

Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data

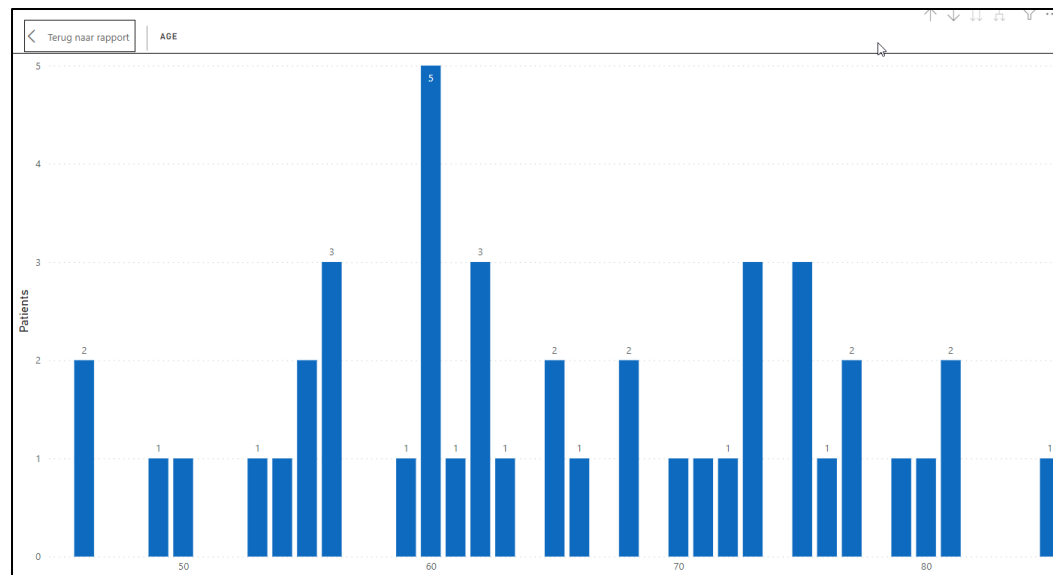
Interactive Visuals



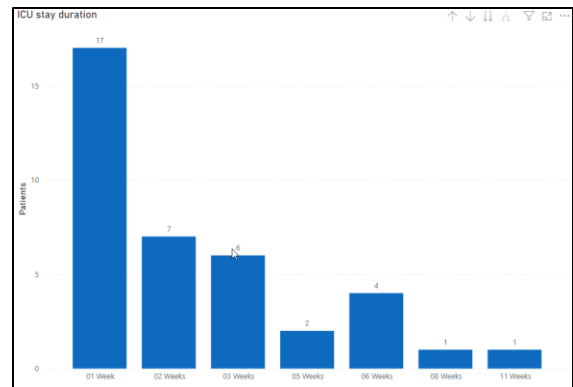
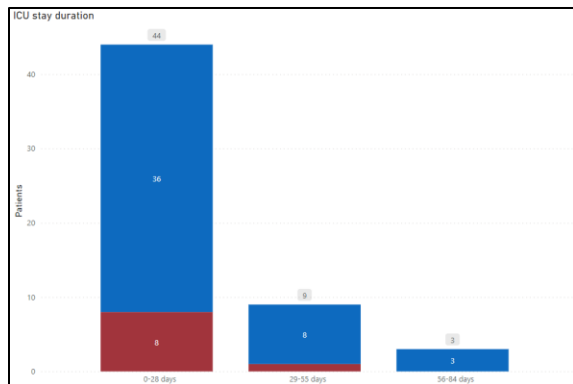
Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data



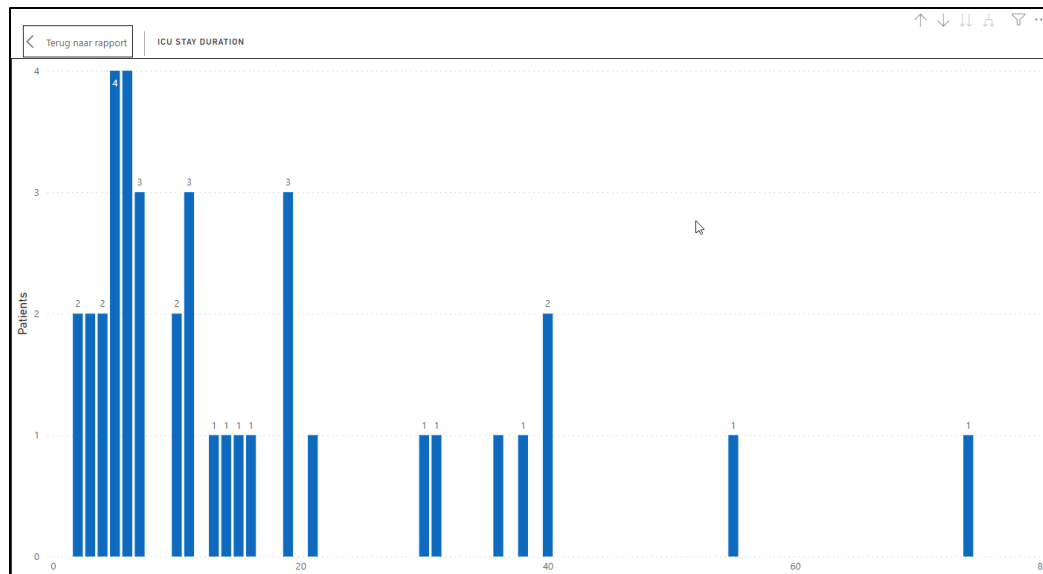
Age



Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data

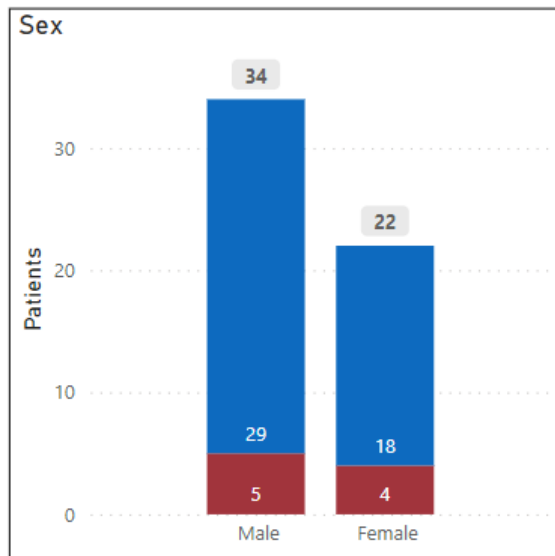


ICU Duration

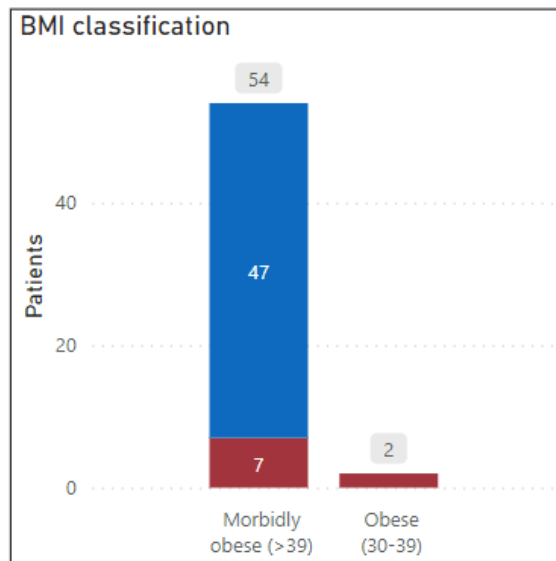


Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data

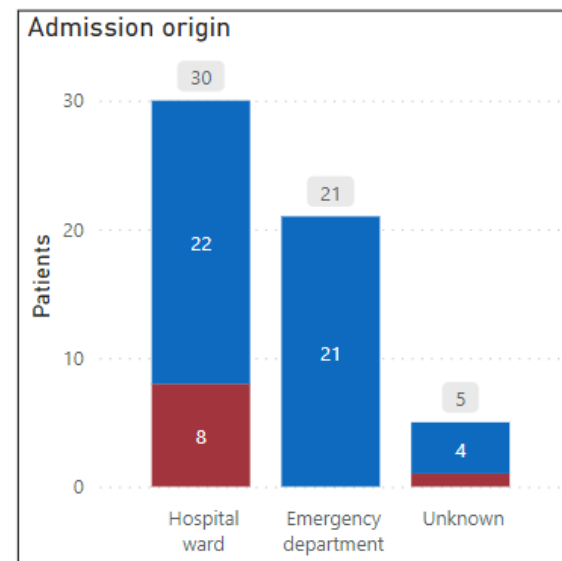
Sex



BMI Classification

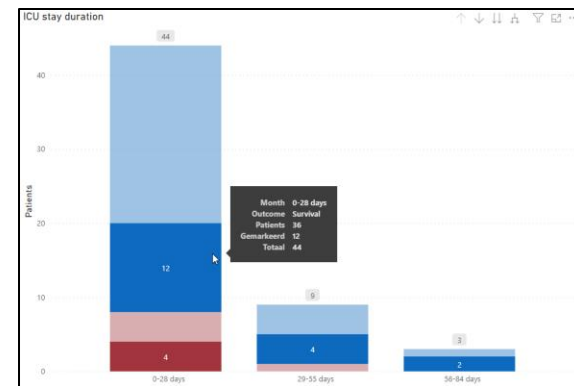
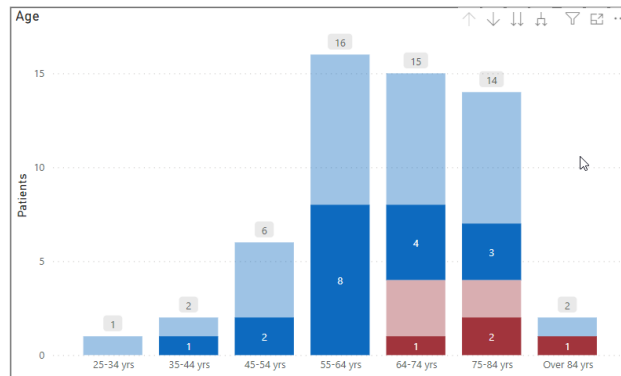
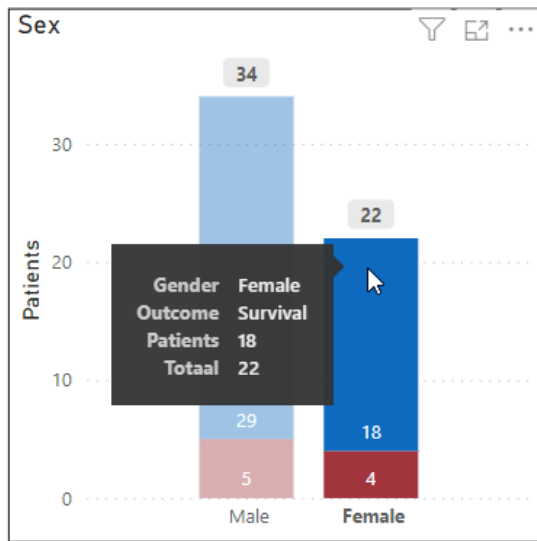


Admission Origin

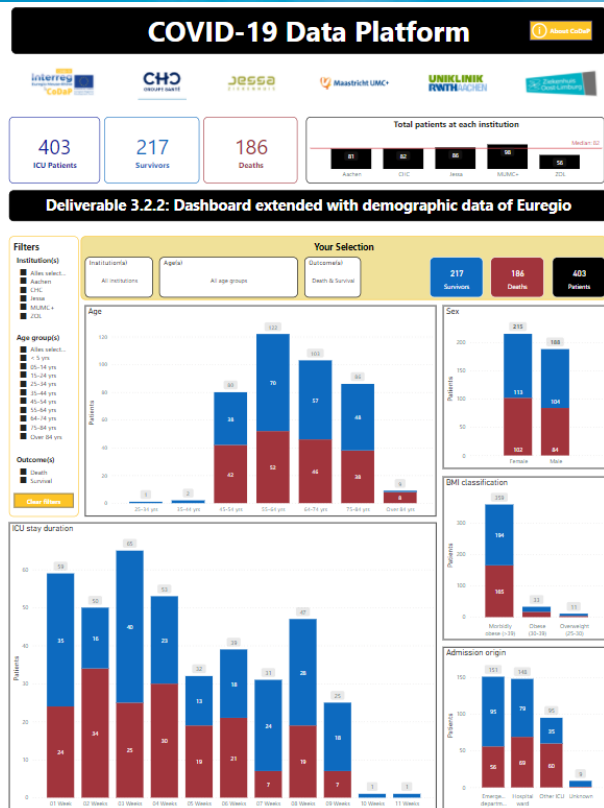


Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data

Visual Interactivity *Selecting a data label in one visual causes the others visuals to display the proportion of corresponding data points*



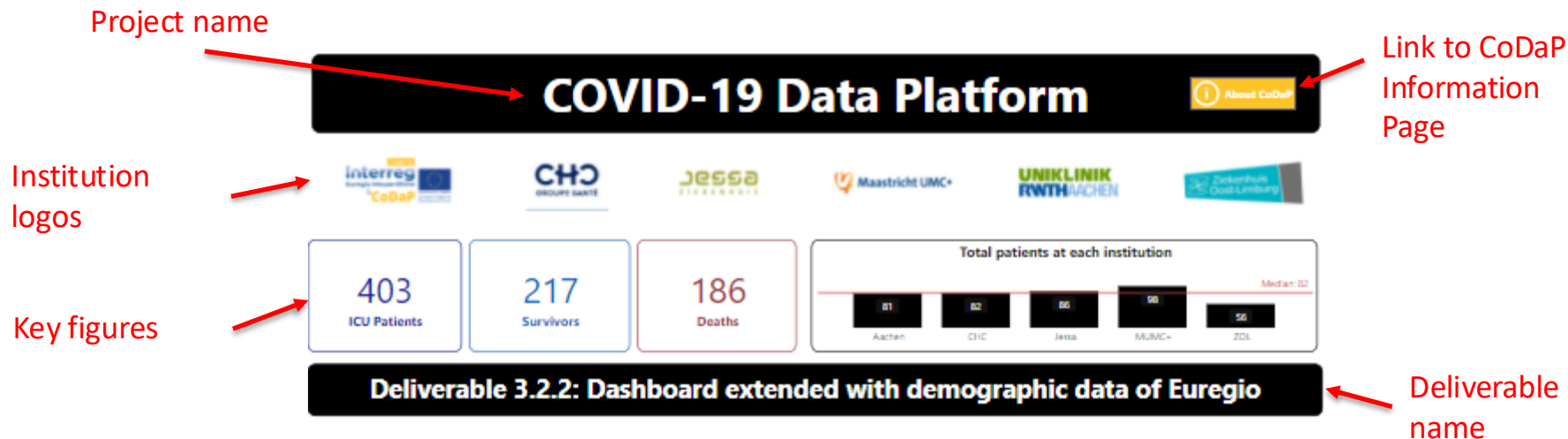
Deliverable 3.2.2: Dashboard extended with demographic data of Euregio



- Page header
 - Project title and link to CoDaP Information Page
 - Participator's logos
 - **NEW: Key figures**
 - Deliverable title
- Data filters:
 - **NEW: Institutions**
 - Age groups
 - Outcome (survival or death)
- Interactive visuals:
 - The 5 visuals developed for deliverable 3.2.1

Deliverable 3.2.2: Dashboard extended with demographic data of Euregio

Page Header



Deliverable 3.2.2: Dashboard extended with demographic data of Euregio

Data Filters

Filters

Institution(s)

- ☐ Alles select...
- ☐ Aachen
- ☐ CHC
- ☐ Jessa
- ☐ MUMC+
- ☐ ZOL

Age group(s)

- ☐ Alles select...
- ☐ < 5 yrs
- ☐ 05-14 yrs
- ☐ 15-24 yrs
- ☐ 25-34 yrs
- ☐ 35-44 yrs
- ☐ 45-54 yrs
- ☐ 55-64 yrs
- ☐ 64-74 yrs
- ☐ 75-84 yrs
- ☐ Over 84 yrs

Outcome(s)

- ☐ Death
- ☐ Survival

Clear filters

Your Selection

Institution(s)

All institutions

Age(s)

All age groups

Outcome(s)

Death & Survival

217

Survivors

186

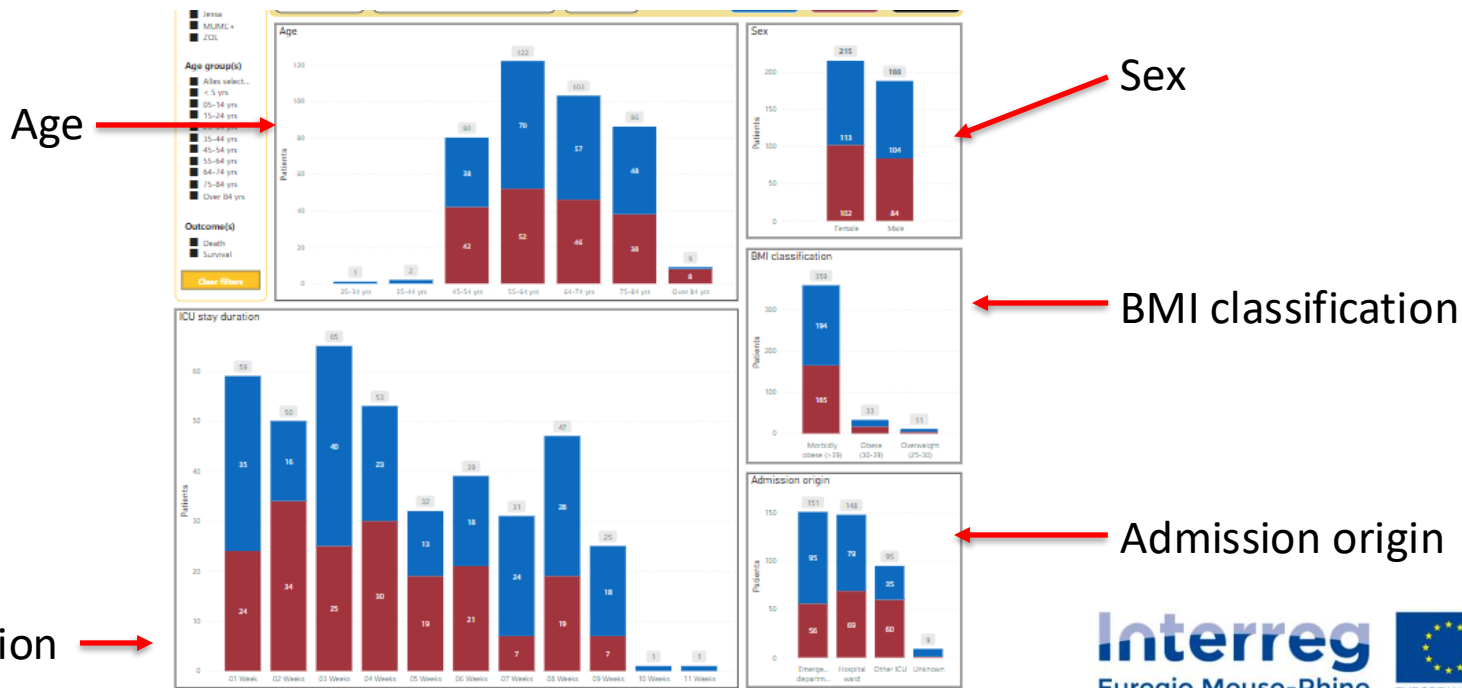
Deaths

403

Patients

Deliverable 3.2.2: Dashboard extended with demographic data of Euregio

Interactive Visuals





Deliverable 3.2.3: Dashboard extended with clinical data of

- Page header
 - Project title and link to CoDaP Information page
 - Participator's logos
 - Deliverable title
- Data filters:
 - Age groups
 - Outcome
 - **NEW Sex**
- Interactive visuals
 1. Highest RR on admission
 2. Lowest MAP on admission
 3. Antibacterial therapy
 4. Invasive ventilation
 5. Ventilation modality
 6. Comorbidity conditions
 7. Comorbidities per patient
 8. Cases by number of comorbidities
 9. Median comorbidities by ICU stay duration
 10. Number of comorbidities by age
 11. Comorbidities by outcome, age and ICU stay duration
 12. Comorbidities by sex, age and ICU stay duration
 13. Death decomposition tree
 14. Survival decomposition tree

Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Filters

Age group(s)

- ☐ All select...
- ☐ < 5 yrs
- ☐ 05-14 yrs
- ☐ 15-24 yrs
- ☐ 25-34 yrs
- ☐ 35-44 yrs
- ☐ 45-54 yrs
- ☐ 55-64 yrs
- ☐ 64-74 yrs
- ☐ 75-84 yrs
- ☐ Over 84 yrs

Outcome(s)

- ☐ Death
- ☐ Survival

Sex

- ☐ Female
- ☐ Male

Clear filters

Data Filters

Your Selection

Age(s)

All age groups

Outcome(s)

Death & Survival

Sex

Female & Male

56

ICU Patients

47

Survivors

9

Deaths



Interreg
Euregio Meuse-Rhine
European Regional Development Fund



EUROPEAN UNION

Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Interactive Visuals

Highest RR on admission

Lowest MAP on admission

Comorbidity conditions

Antibacterial Therapy

Outcome by comorbidities per patient

ICU stay duration by median average comorbidities per patient

Comorbidities per patient

Ventilation modality

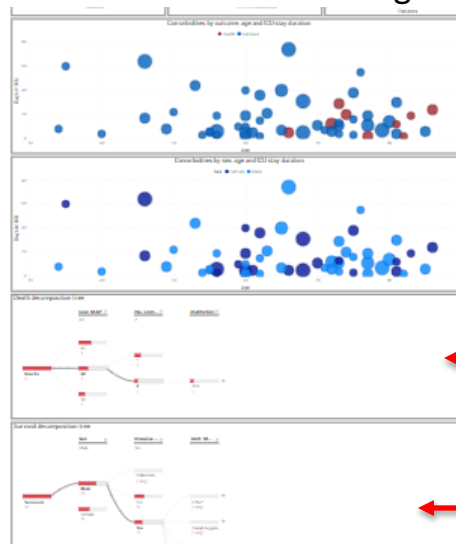
Age by comorbidities per patient

Comorbidities by outcome, age and ICU stay duration

Comorbidities by sex, age and ICU stay duration

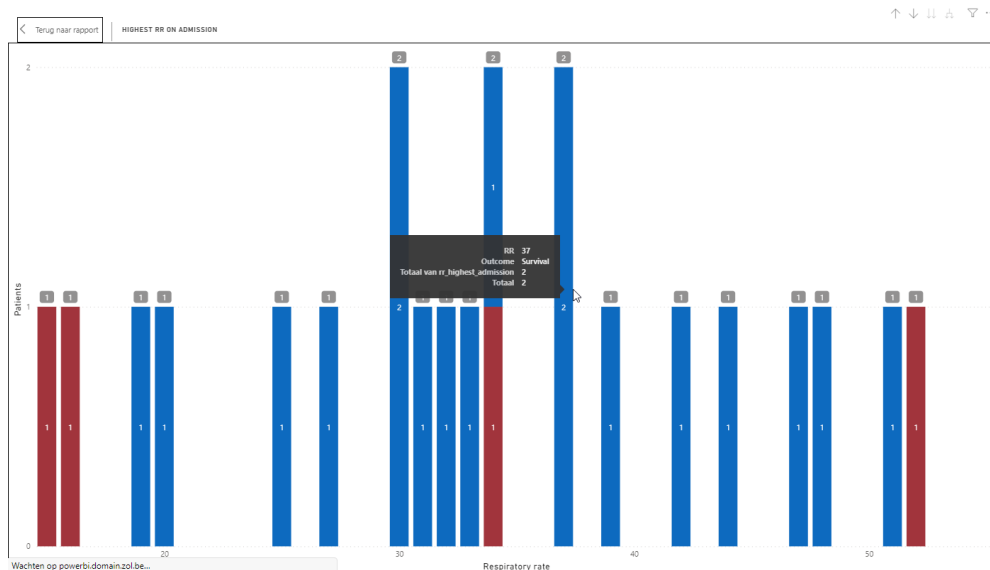
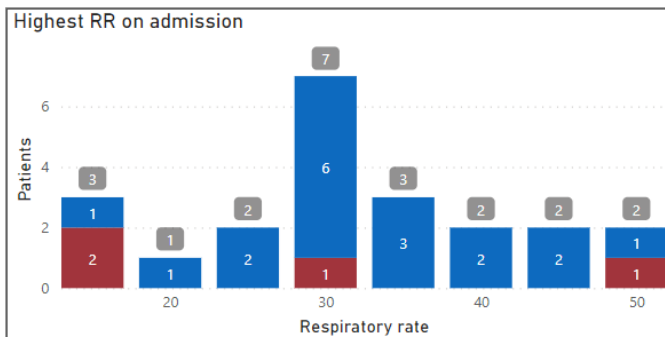
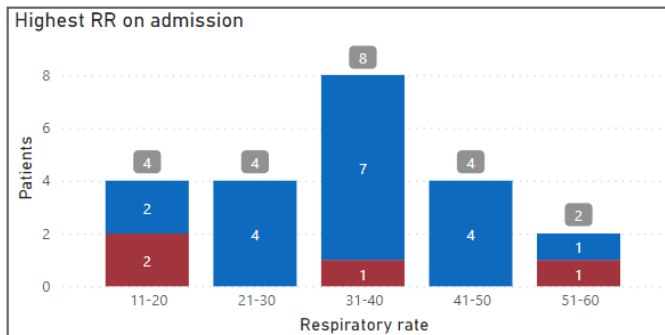
Death decomposition tree

Survival decomposition tree



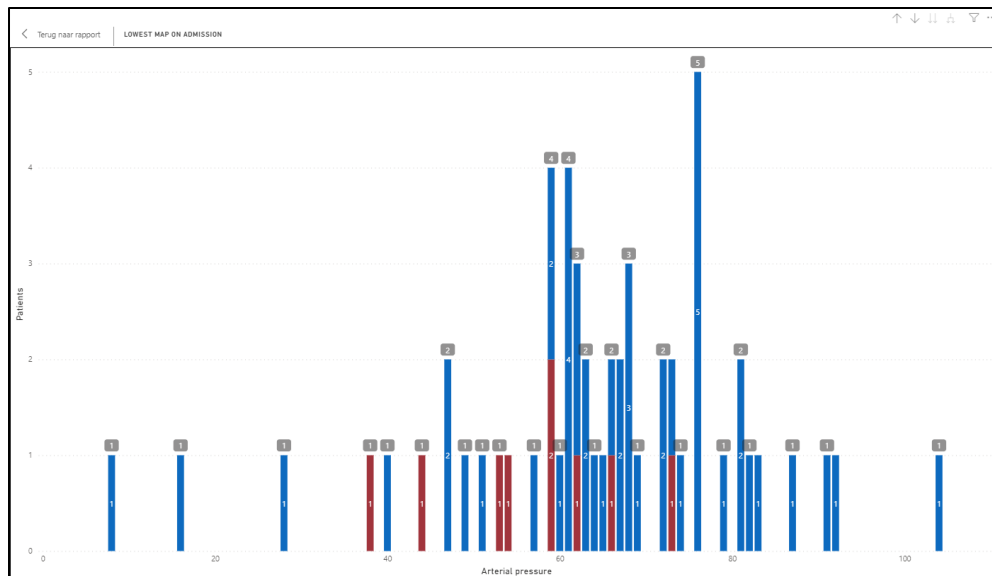
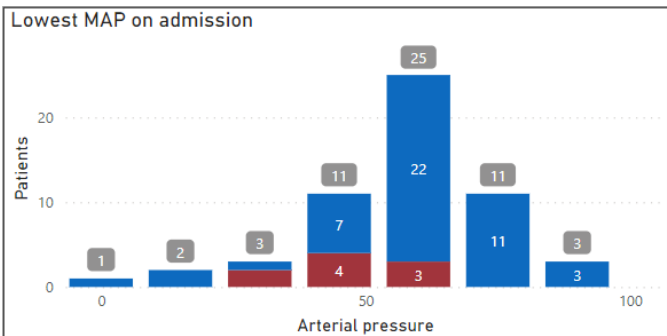
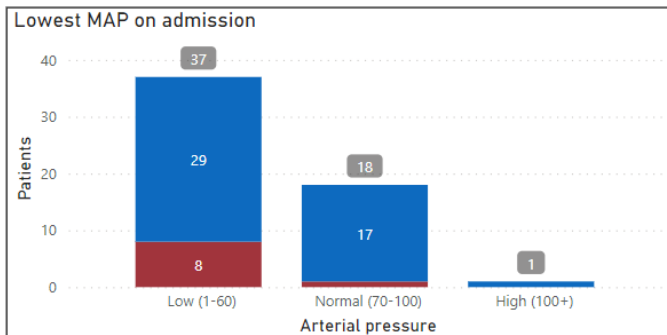
Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Highest respiratory rate on admission



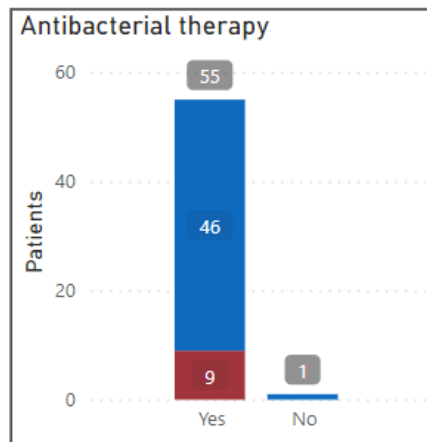
Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Lowest Mean Arterial Pressure on admission

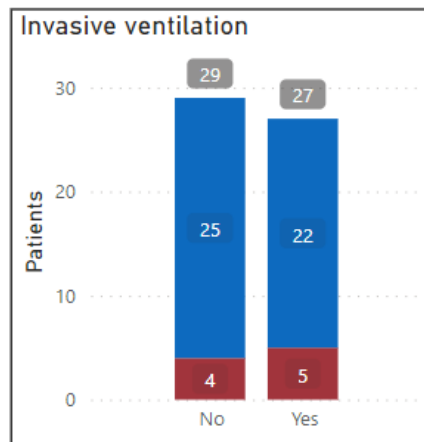


Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

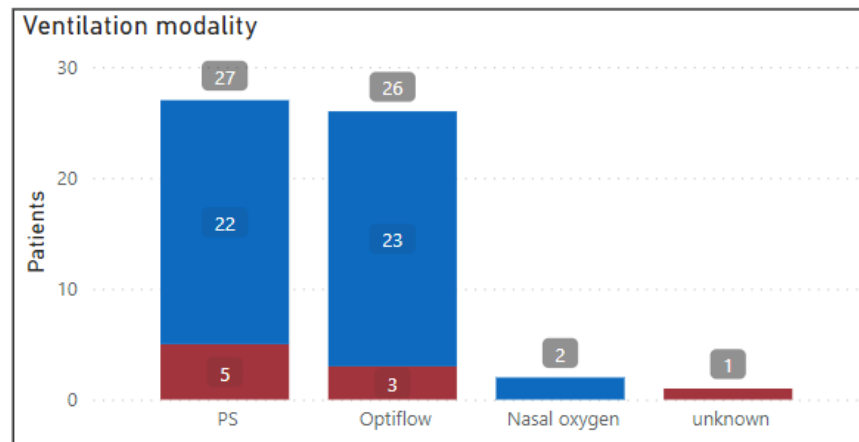
Antibacterial therapy



Invasive ventilation



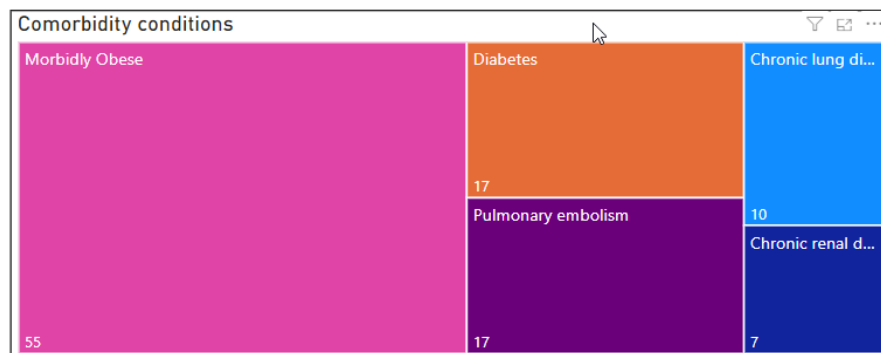
Ventilation modality



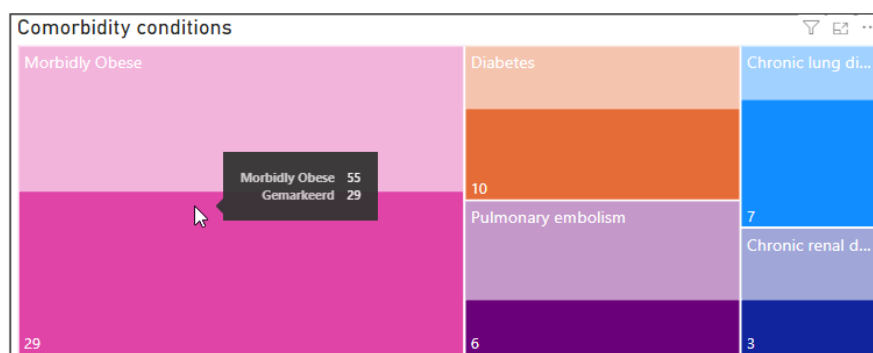
Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Comorbidity conditions

Initial display

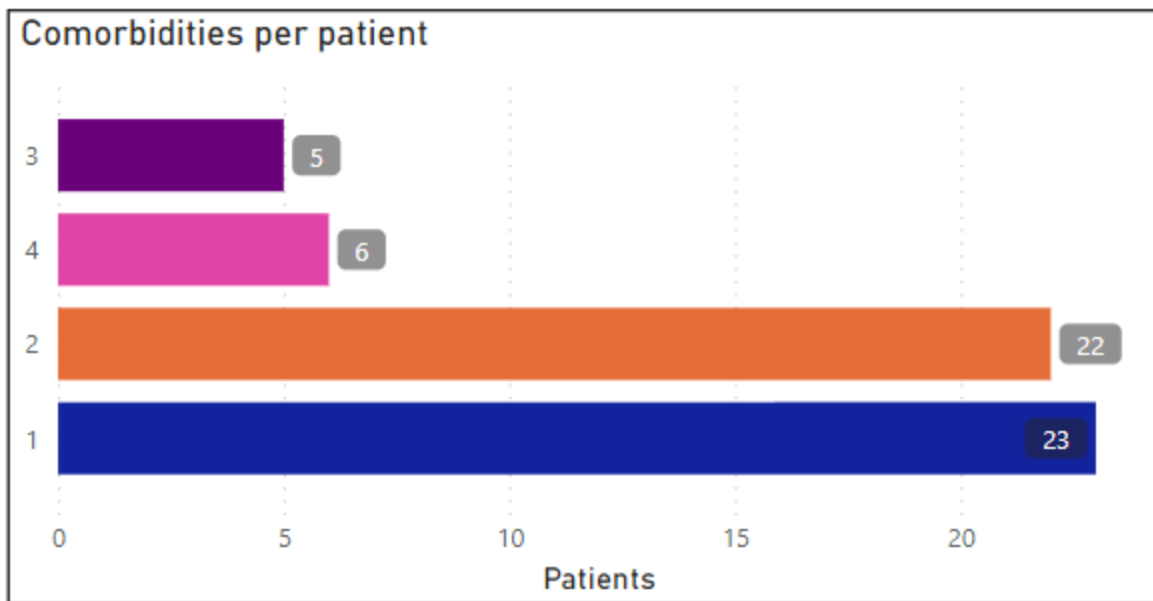


Interactive display



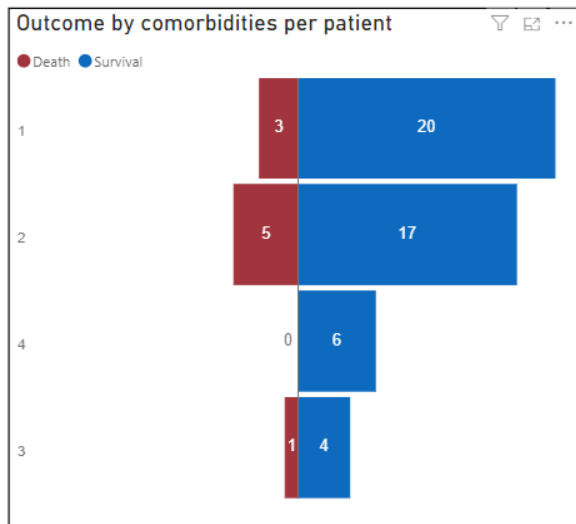
Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Comorbidities per patient

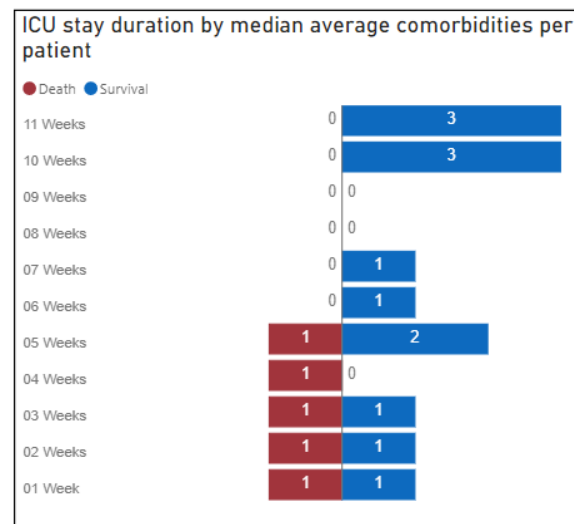


Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Outcome by comorbidities per patient



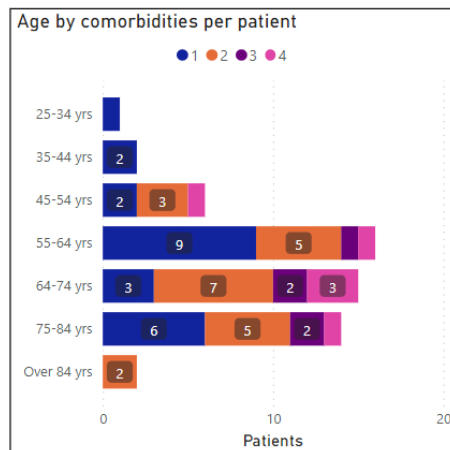
Median comorbidities by ICU stay duration



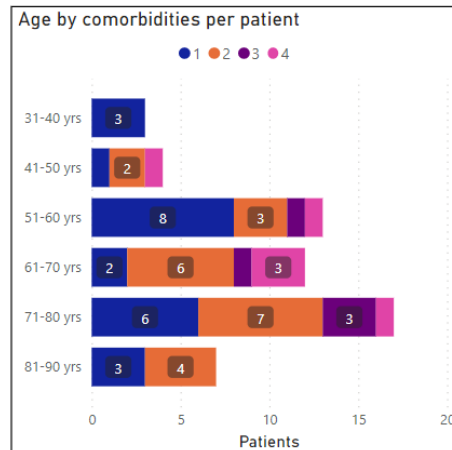
Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Age by comorbidities per patient

Demo age groups



Decades

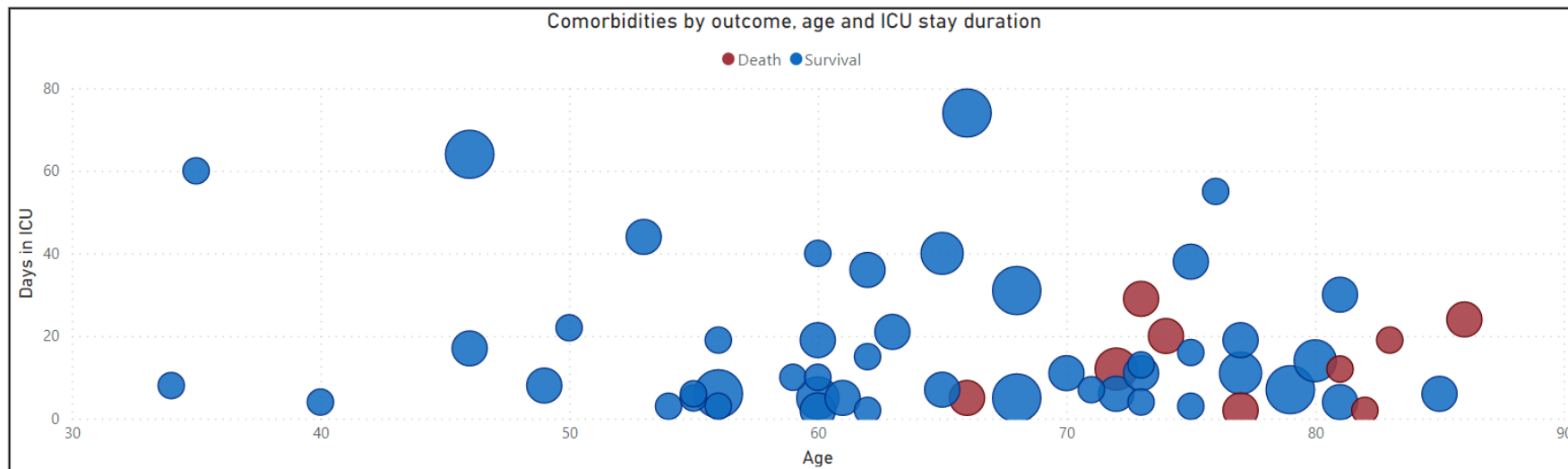


Focus mode: Individual Years



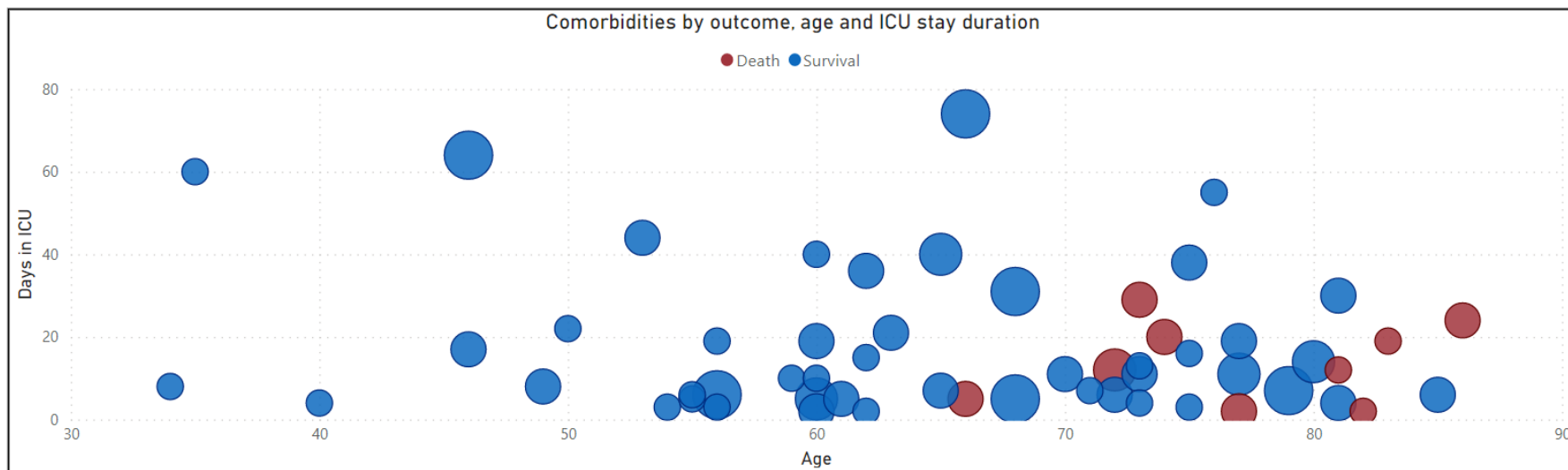
Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Comorbidities by outcome, age and ICU stay duration



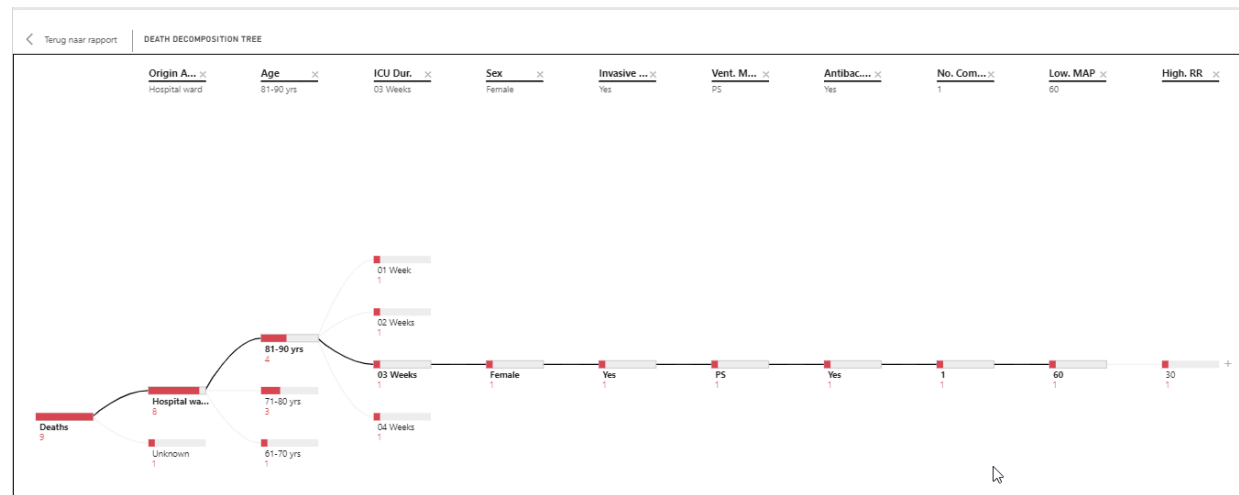
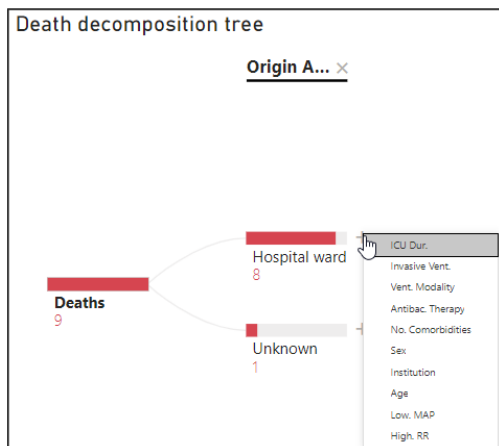
Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Comorbidities by sex, age and ICU stay duration

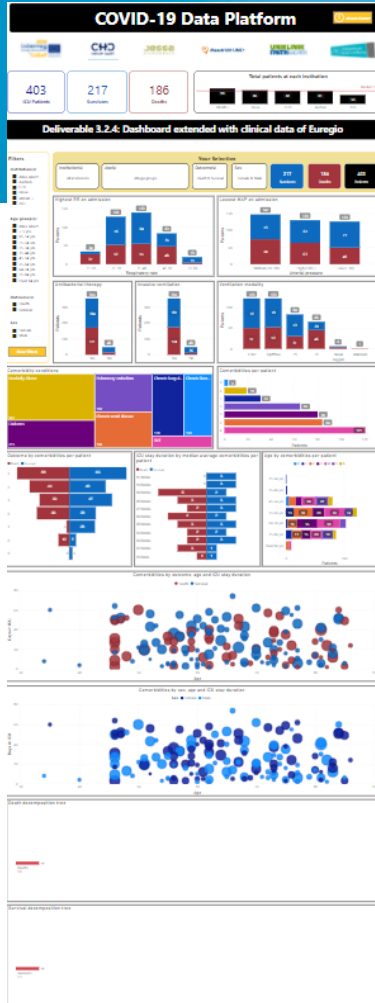


Deliverable 3.2.3: Dashboard extended with clinical data of ZOL

Death and Survival decomposition tree



Deliverable 3.2.4: Dashboard extended with clinical data of Euregio



- Page header
 - Project title and link to CoDaP Information page
 - Participator's logos
 - Key figures
 - Deliverable title
- Data filters:
 - Institutions
 - Age groups
 - Outcome
 - Sex
- 14 Interactive visuals display data for all participating institutions

Project communication

CoDaP Information Page

COVID-19 Data Platform

This report has been produced by Ziekenhuis Oost-Limburg in collaboration with Le Groupe Santé CHC, Jessa Ziekenhuis, Maastricht University Medical Centre+, and Uniklinik RWTH Aachen, in response a project call issued by Interreg Euregio Maas-Rijn (EMR). EMR is a cross-border subsidy program within the European Union consisting of 13 regional partners in the Meuse-Rhine Euregio. Its aim is to strengthen the economic and social fabric in the border region between Belgium, Germany and the Netherlands by stimulating cross-border cooperation. This report contributes to the CoDaP project, which seeks to fortify the border region against the COVID-19 pandemic through developing cross-border consensus handling guidelines, establishing a COVID-19 data platform to anticipate a new wave, conducting studies to improve clinical guidelines, and building an efficient and secure IT infrastructure. This report uses data concerning the ICU populations of participating institutions. Further information about the CoDaP study is available from <https://www.interregemr.eu/projecten/codap>

CHC GROUPE SANTÉ **JESSA ZIEKENHUIS** **Maastricht UMC+** **UNIKLINIK RWTH AACHEN** **Ziekenhuis Oost-Limburg**

[Back to the report](#)

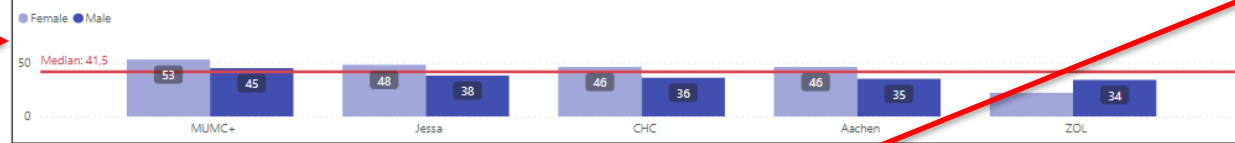
Logos link to project page on organization website

Back to report button

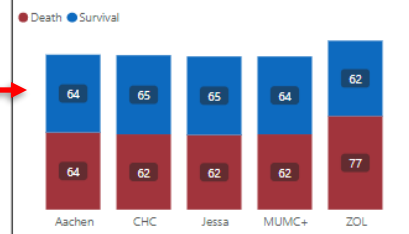
Directions for future work

Comparison Visuals

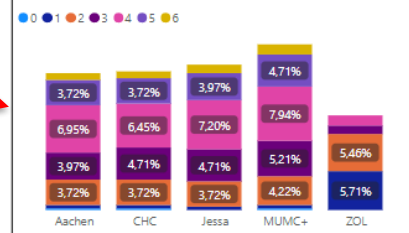
Number of male and female patients per institution



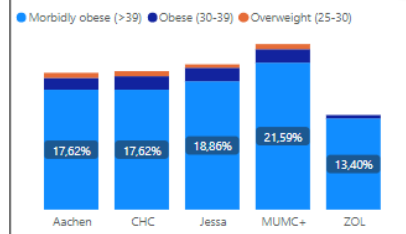
Medians of patient ages per institution



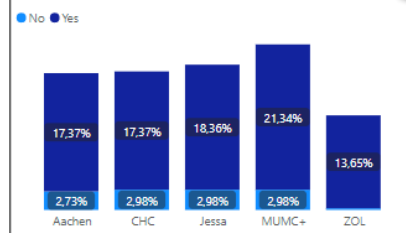
% Patient comorbidities per institution



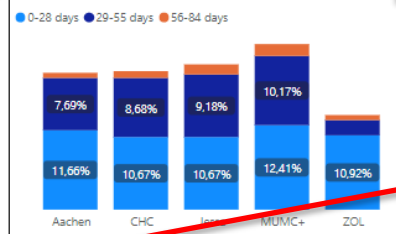
% BMI classifications per institution



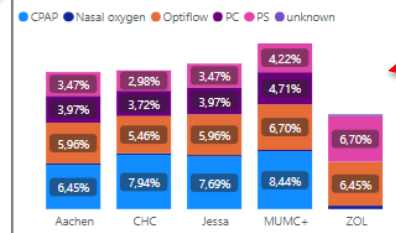
% Antibacterial therapy per institution



% Days in ICU per institution



% Ventilation modality per institution



% BMI classifications per institution

% Days in ICU per institution

% Antibacterial therapy per institution

% Ventilation modality per institution

Technology selection

“More data, more scientific accuracy”

MS Power BI

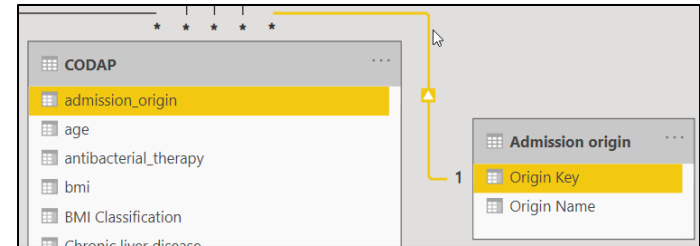
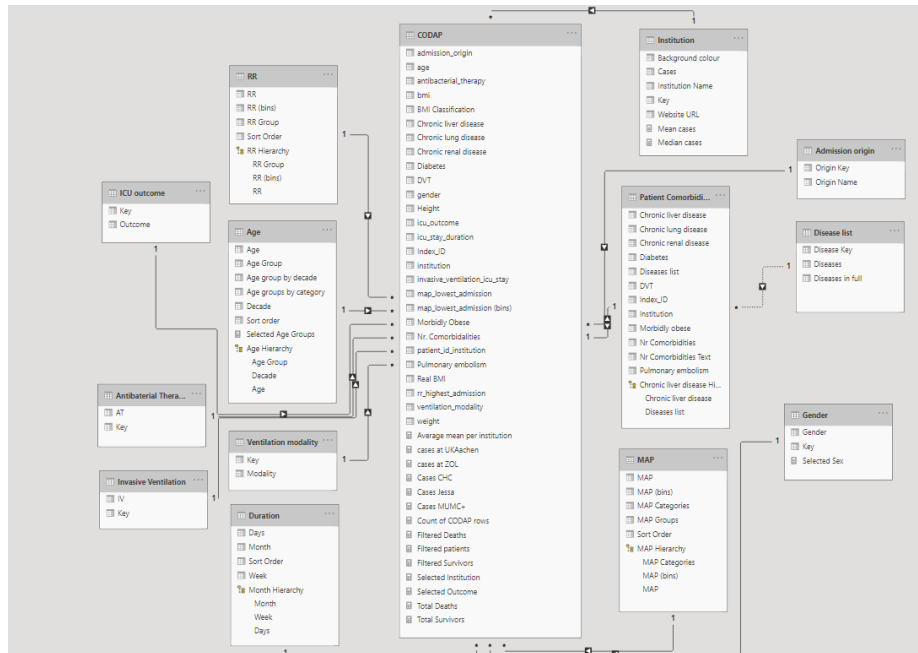
- Can handle millions of rows of data;
- Connect to, transform and clean data from multiple sources;
- Create a multi-page reports
- Create interactive images that visually represent data; and
- Share visuals and data with securely with others.

CoDaP Dataset example

Dataset field	Description
Institution	A unique identification number for each participating institution.
Patient ID institution	An identification number given to a patient by the institution.
Length	The height of the patient in centimetres.
Diabetes	Indicates whether the patient has diabetes.
MAP lowest admission	Measurement of arterial pressure
ICU stay duration	Length of patient's stay in the ICU in days.
ICU outcome	Indicates if the patient survived or died.

Technology selection

Power BI Data model



Summary

1. Dashboard technology

2. Dashboard demonstration

▪ Demographic Data deliverables

- Deliverable 3.2.1: Proof-of-concept dashboard with ZOL demographic data
- Deliverable 3.2.2: Dashboard extended with demographic data of Euregio
- 5 data visuals including Age and ICU Stay Duration
- Data filtering and visual interactivity

▪ Clinical Data deliverables

- Deliverable 3.2.3: Dashboard extended with clinical data of ZOL
- Deliverable 3.2.4: Dashboard extended with clinical data of Euregio
- 14 data visuals including Median comorbidities by ICU stay duration and Survival decomposition tree

▪ Project communication

▪ Future evolution

Questions

Questions and Comments