Algoritmy strojového učení

jako klíč k vyšším standardům kvality zdravotnických dat

Contract Research --- Digital Health --- Real-World Data
Clinical Data Management --- Electronic Data Capture
Data Science --- Virtual Patients

iba Institute of Biostatistics and Analyses

Kdo jsme?

..:: CRO, spin-off Masarykovy univerzity

iba healthy data

Projekty za hranicemi klinických hodnocení

..:: SW vývoj, vlastní R&D

EHDEN
EUROPEAN HEALTH DATA & EVIDENCE NETWORK
ecrin

...well-recognized CRO!

Making Waves

..:: Our Voice in Clinical Research & Health Informatics Forums

MEDICAL FACULTIES NETWORK

Quality and regulation play a role !

..:: Integrated quality management system

EU-MDR 2017/745

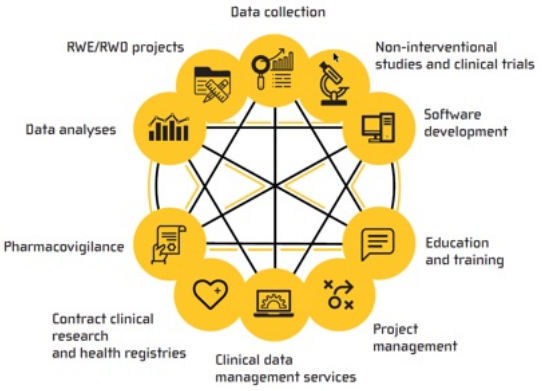
ISO

GOOD CLINICAL PRACTICE compliant

GDPR ready

Streamlined Services for Clinical Research

..:: Discover the possibilities!

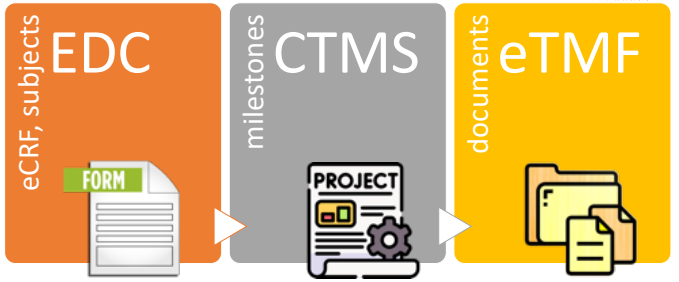


iba Institute of Biostatistics and Analyses

Electronic Data Capture

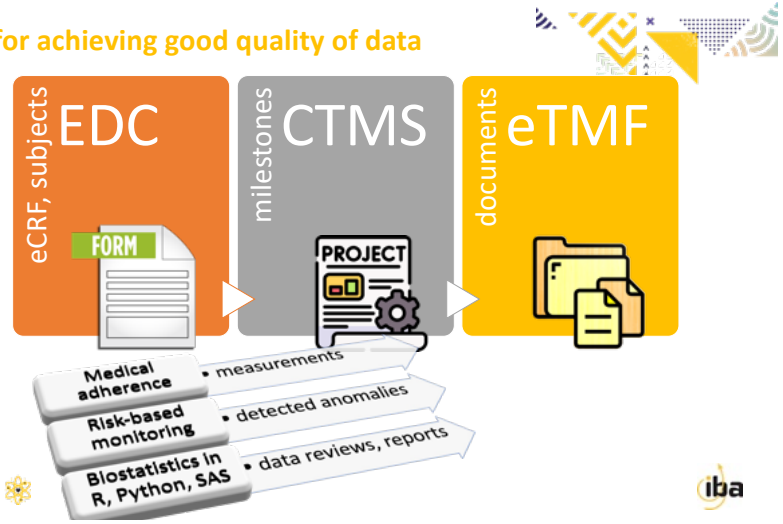
Clinical Data Management platform

TOOLS for achieving good quality of data

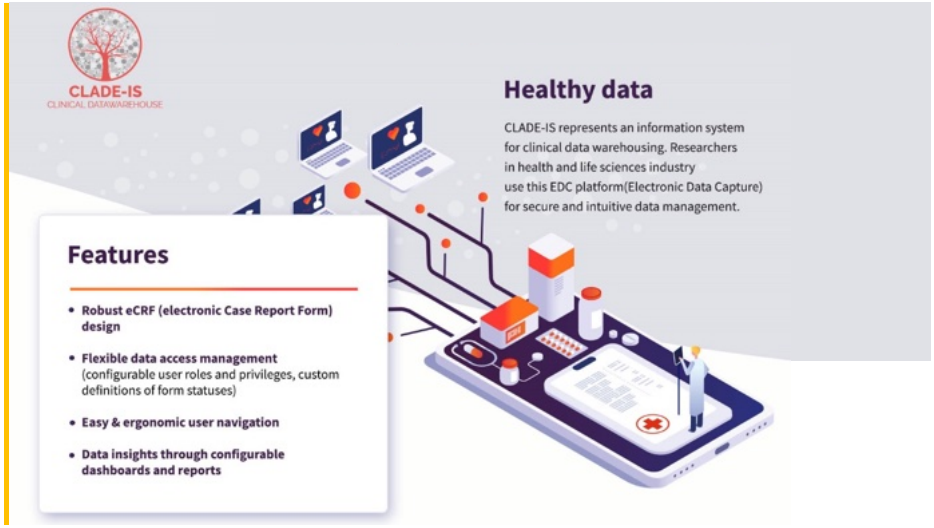


iba

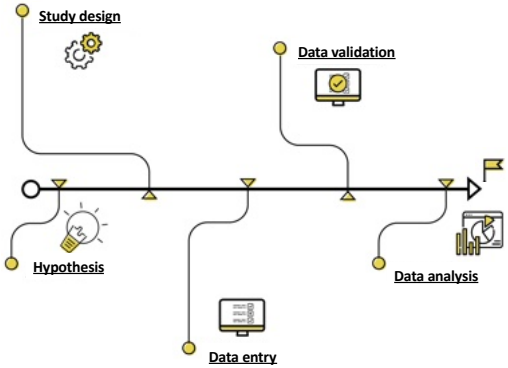
TOOLS for achieving good quality of data



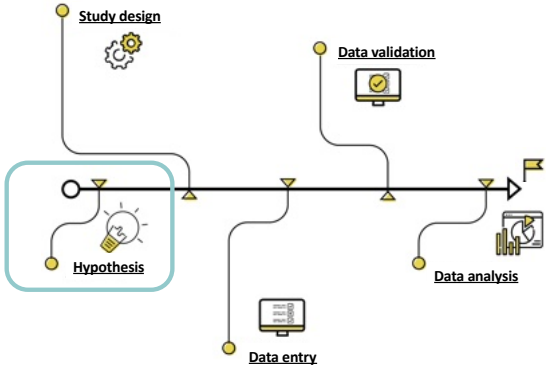
iba



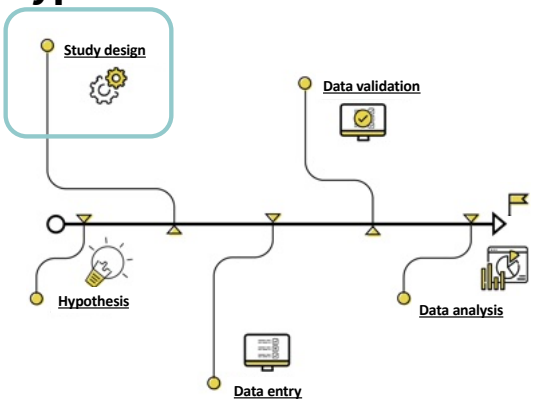
From a hypothesis to an outcome



From a hypothesis to an outcome

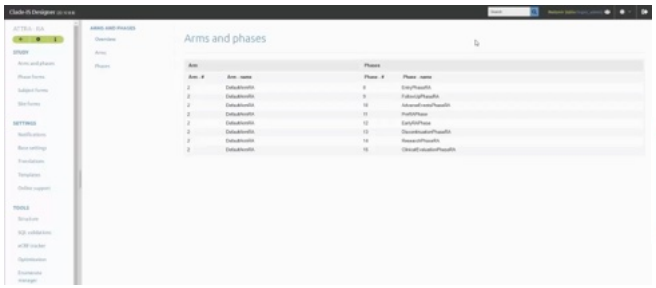


From a hypothesis to an outcome



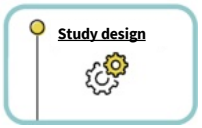
Study design

Robust structure entities

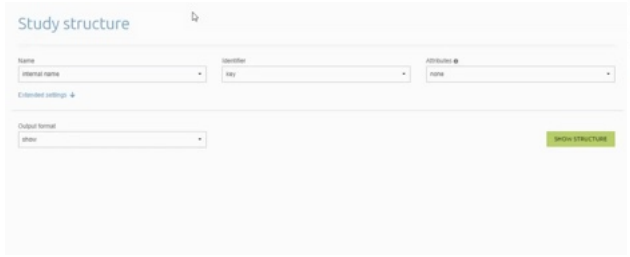


Who: Data manager

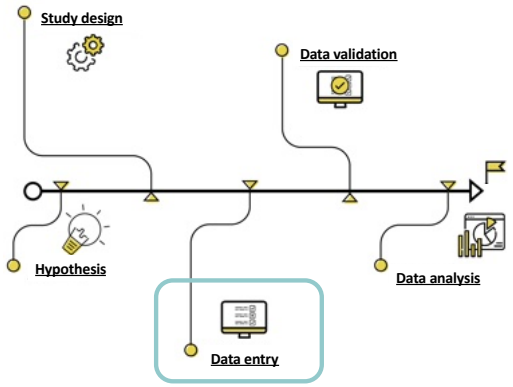
Where: Designer



Study structure export



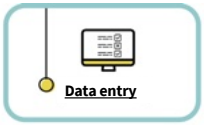
From a hypothesis to an outcome



Data entry

Create and edit forms

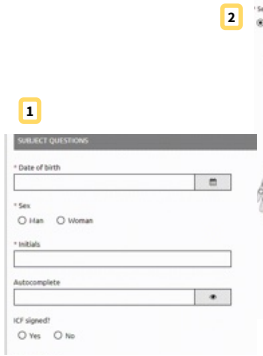
Who: Healthcare professional
Where: Study



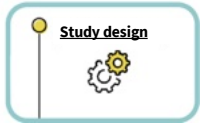
Data entry – UX features

Wide range of data types and question settings

- text - short text, long text
- date – date and time, date, time
- selectbox – enumerate, codebook
- number - integer, real
- yes / no
- file
- button
- heading text
- json
- …other (custom)



Who: Data manager
Where: Designer

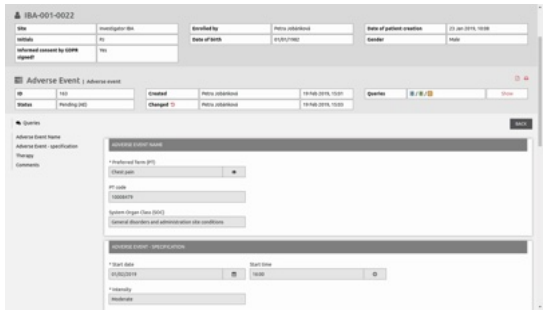


Data entry - UX features

Edit checks & instant validation

Data entry

Responsivity



Who: Healthcare professional
Where: Study

Data entry

Data entry

Single Form Mode – authentication through a hash code

Who: Healthcare professional
Where: Study

Data entry

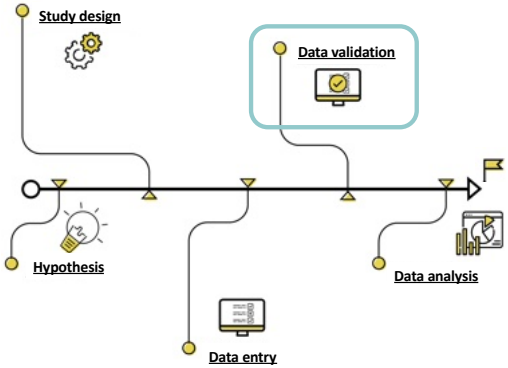
UX features

Skip logic

Who: Healthcare professional
Where: Study

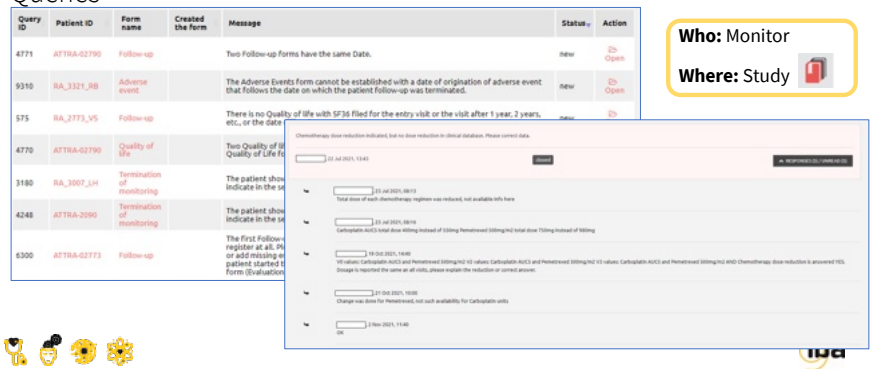
Vkládání dat

From a hypothesis to an outcome



Data Quality Checks

Queries

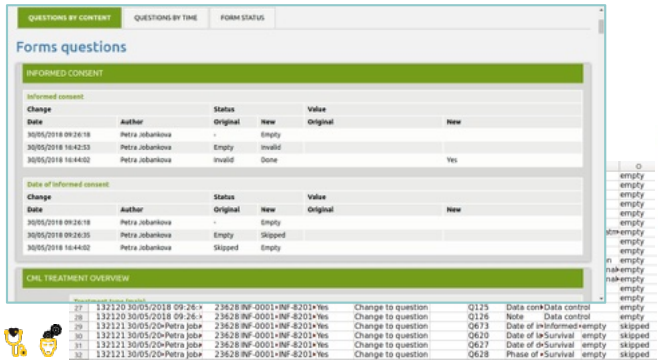


Who: Monitor

Where: Study

Data lineage

Audit trail



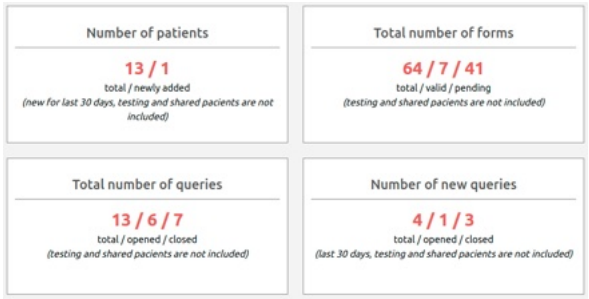
Who: QA manager

Where: Study

Data entry

Data insights

Dashboard



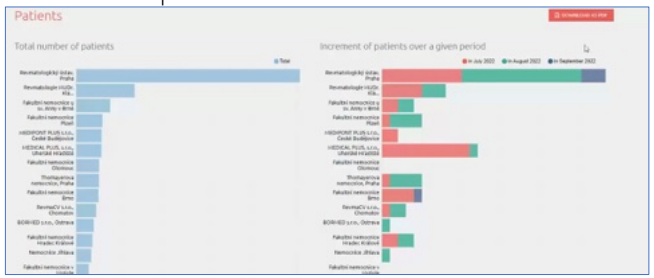
Who: Coordinator

Where: Study

Data validation

Data insights

Interactive reports



Who: Coordinator

Where: Study

Data validation

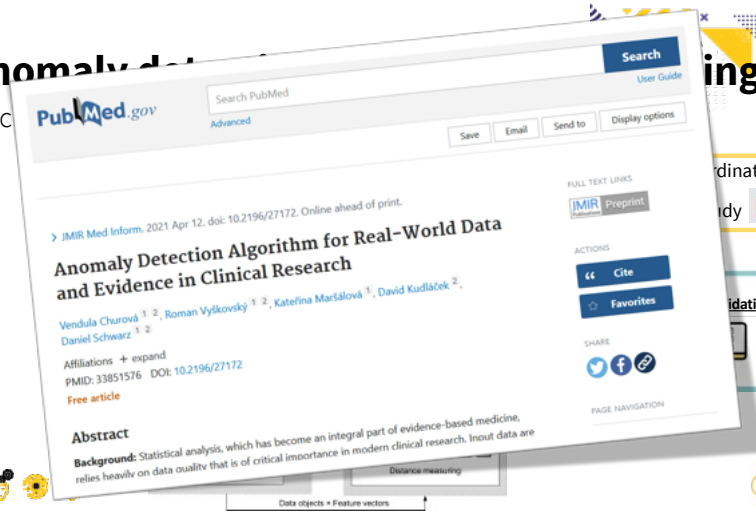
Anomaly d ing

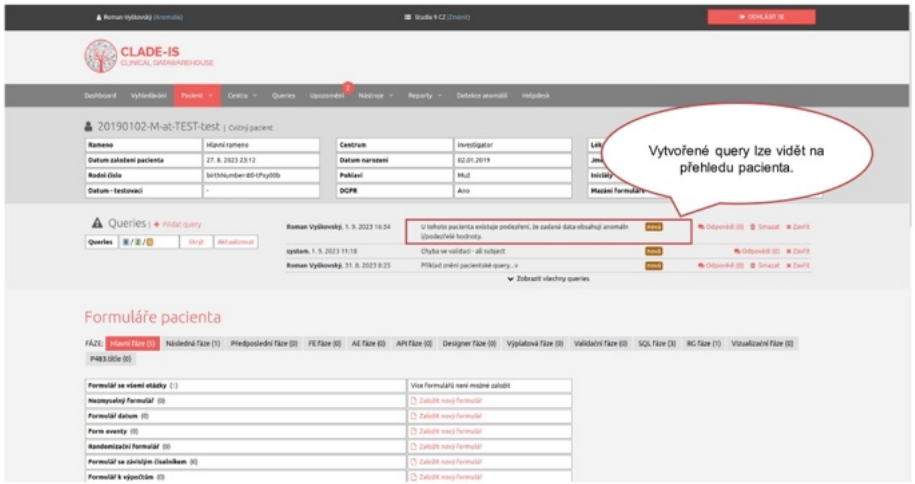
Effic

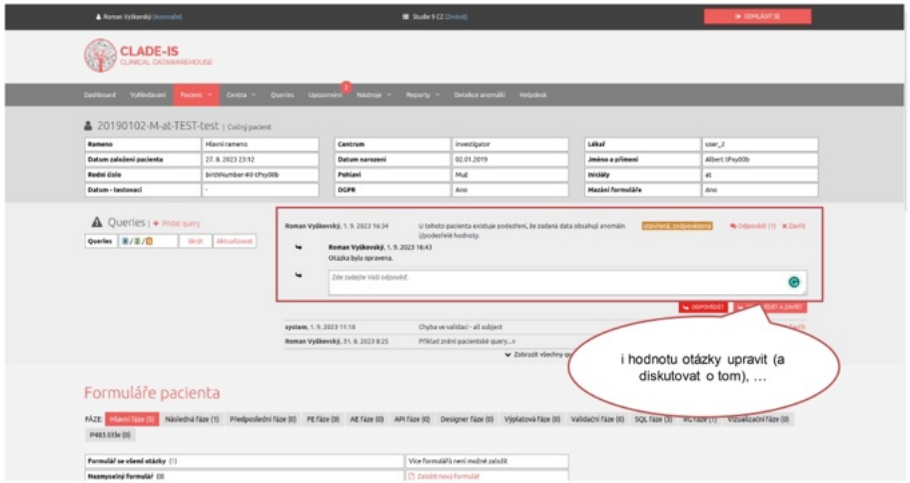
dinator

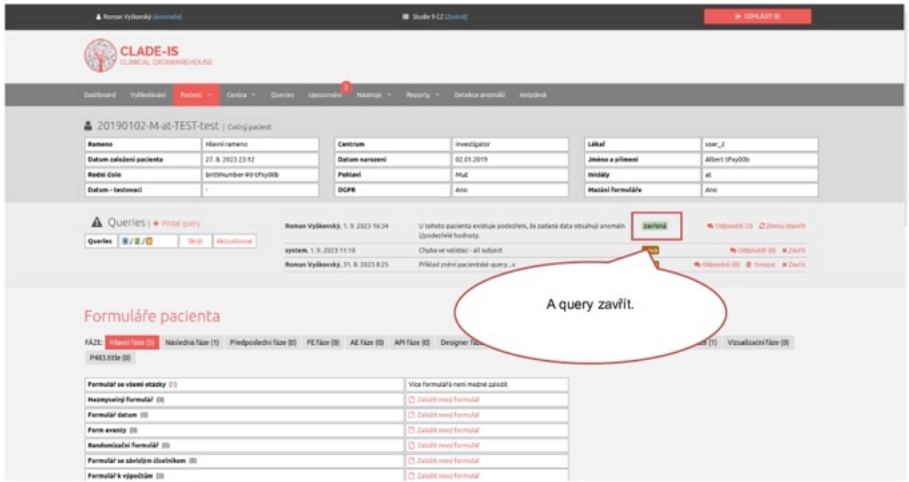
dy

idation

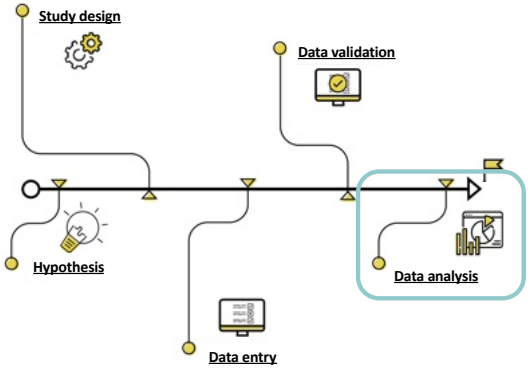






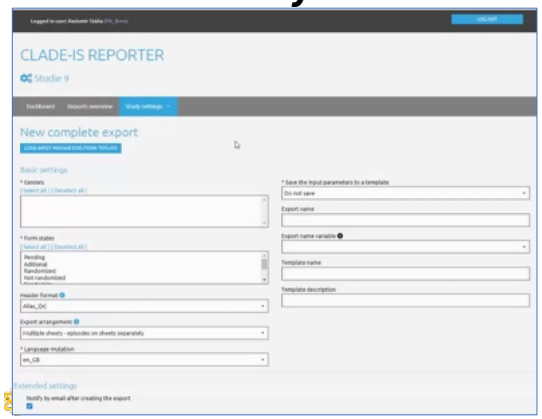


From a hypothesis to an outcome



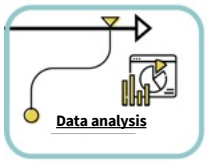
Toolkit for data analysis

Export



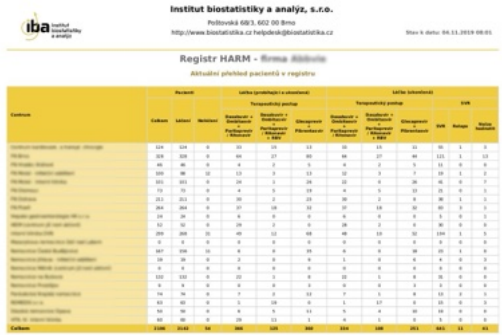
Who: Analyst

Where: Reporter



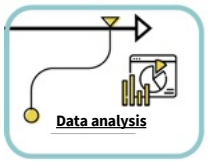
Toolkit for data analysis

Report



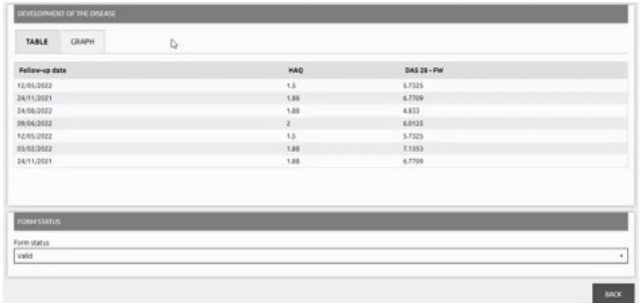
Who: Analytik

Where: Reporter

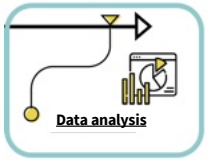


Toolkit for data analysis

On-line vizualization

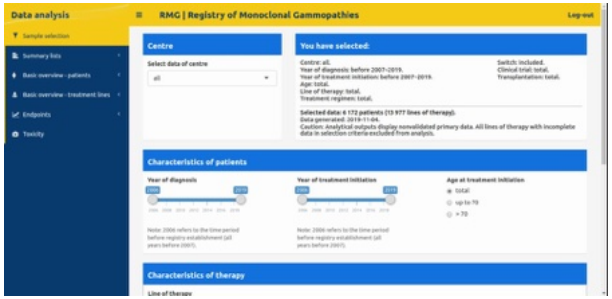


Who: Healthcare professional
Where: Study

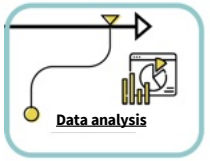


Toolkit for data analysis

Visual analytics on a project website



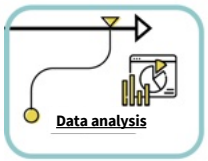
Who: Biostatistician
Where: Ext. website



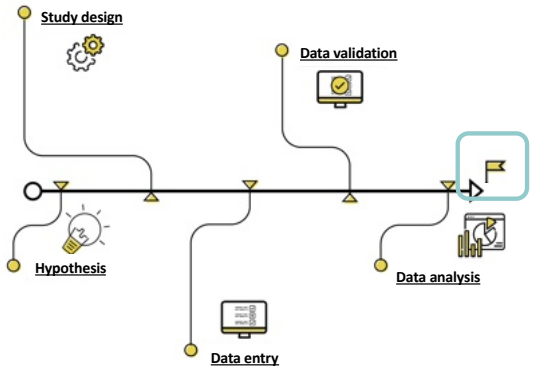
Toolkit for data analysis

Visual analytics on a project website

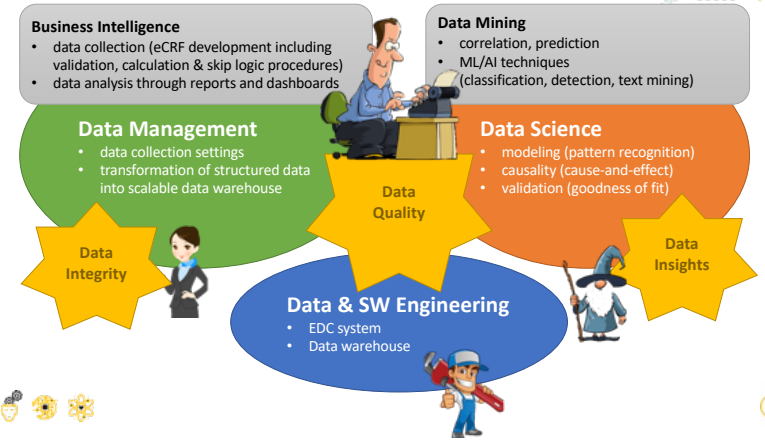
Who: Biostatistician
Where: Ext. website



From a hypothesis to an outcome



PEOPLE behind data-driven clinical research



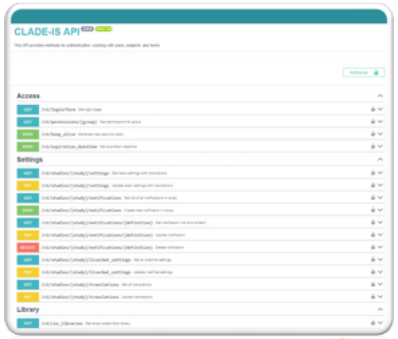
Integrace systémů

..:: API

CLADE-IS na straně příjemce
- ✓ Existující CLADE-IS API
- ✓ Individuální řešení

CLADE-IS na straně odesílatele
- ○ API druhé strany

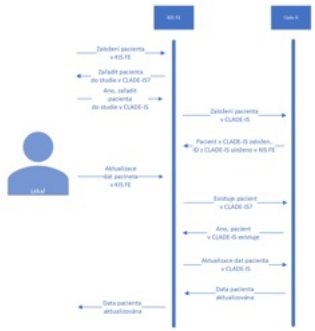
Naše zkušenosti: přenos laboratorních dat
- ➢ Ideální startovní bod integrace.
- ➢ Velké množství čísel/hodnoty, ve kterých lze snadno udělat chyby při ručním přepisu.
- ➢ Jednoduché mapování (jednotky).



Integrace systémů

..:: API = bezpečnost

- Zabezpečení datové cesty.
- Testování a validace přenosu.
- Průběžná kontrola přenášených dat (testovací datasety).

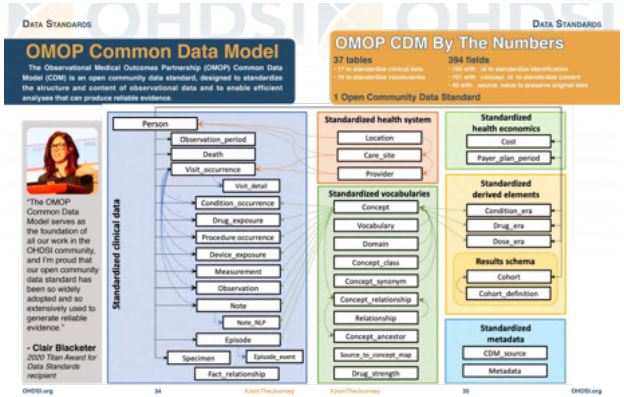


Integrace systémů

..:: datové standardy

Integrace systémů

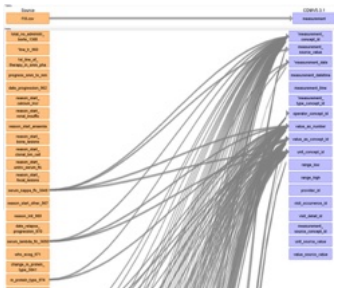
..:: datové standardy



Integrace systémů

..:: EHDEN a OMOP

- Evropský ekosystém pro zpracování a využití zdravotnických dat
- IBA je certifikovaný SME partner v síti EHDEN



Integrace systémů

..:: Automatizace pomocí AI/robotů

Pozvánka

www.biostatistika.cz | www.clade-is.com

schwarz@biostatistika.cz

https://www.linkedin.com/in/daniel-schwarz-197706/

https://ibapodcast.podbean.com/

CLADE-IS
CLINICAL DATAWAREHOUSE

3DIAMOND

iba Institute of Biostatistics and Analyses

healthy data