

Digitalisierung und Interoperabilität im Medizincontrolling

09 2025

K. Triep, Dr. med, MAS Digital Health

Insel Gruppe AG, Bern, Schweiz



Kernaufgaben 2002 - 2010



Kodierung



Fallmanagement

ProCod «professionelle Codierung»

- Einführung SwissDRG
 - Daten
 - Kodierqualität
-
- Bis 2016: 1 Standort, 1 Unternehmen, 1 BUR

Landschaft 2024

Medizincontrolling / Health Information Management Insel Data Science Center – Product Line Medizin



Kodierung



Fallmanagement



Data Science



Datenmanagement



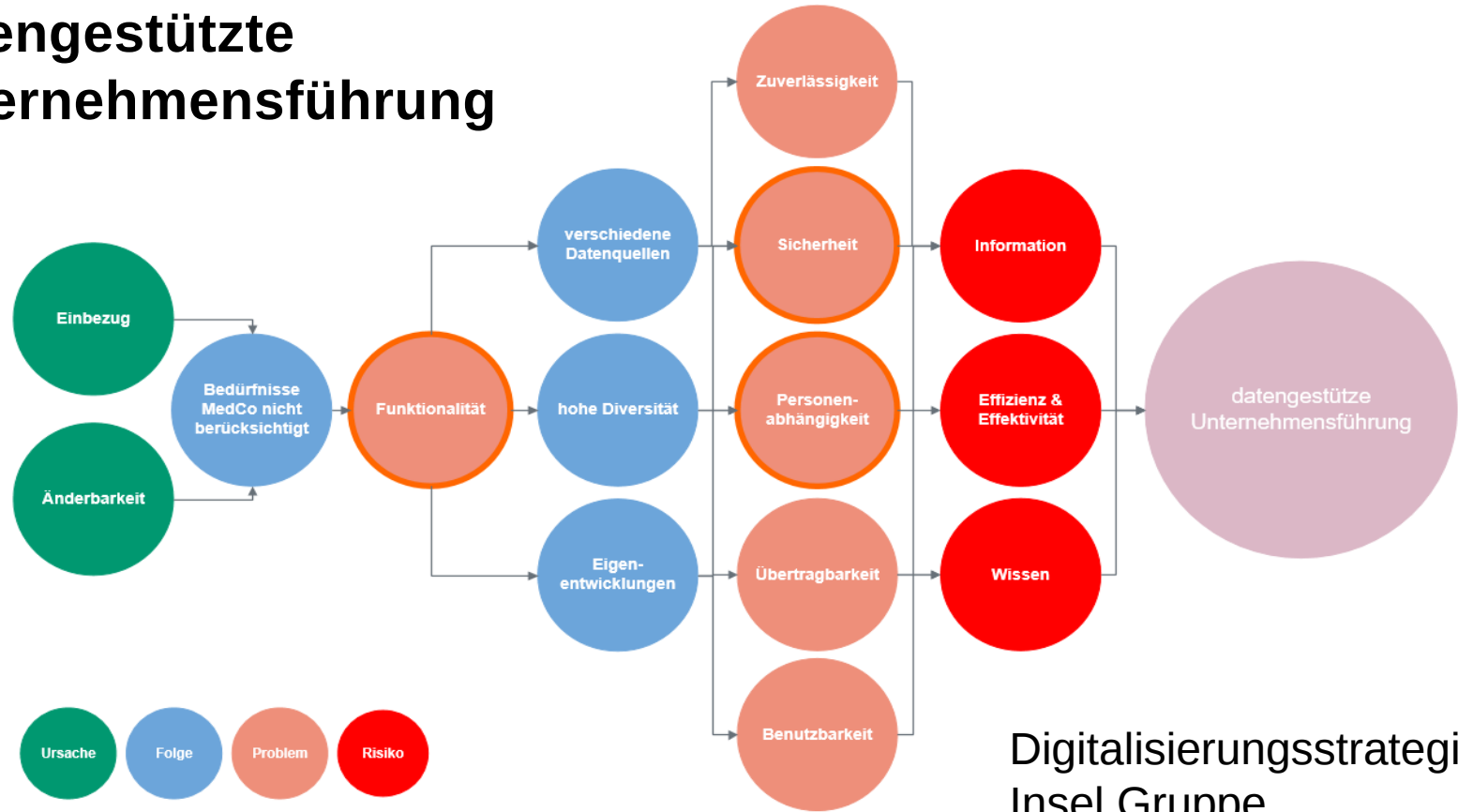
Business Analytics



Business Innovation
& Support

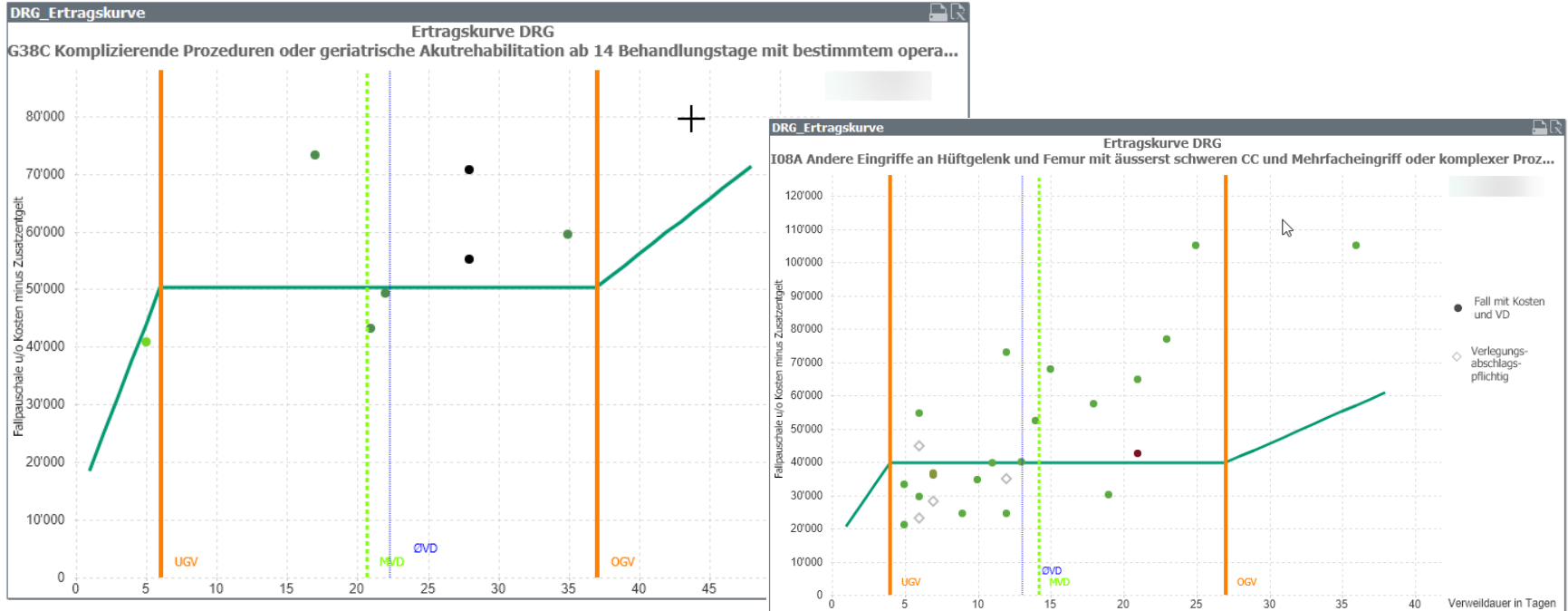
- Clinical Decision Support
- Klinische Dashboards
- QM: POA (Diagnose bei Eintritt vorhanden), UROT (ungeplante Wiederaufnahme in den OP)
- Register
- Forschung (eigene Projekte und als Datenlieferant)
- Nutzung verschiedener Kataloge / Terminologien
- Ambulante Fallpauschalen

Datengestützte Unternehmensführung



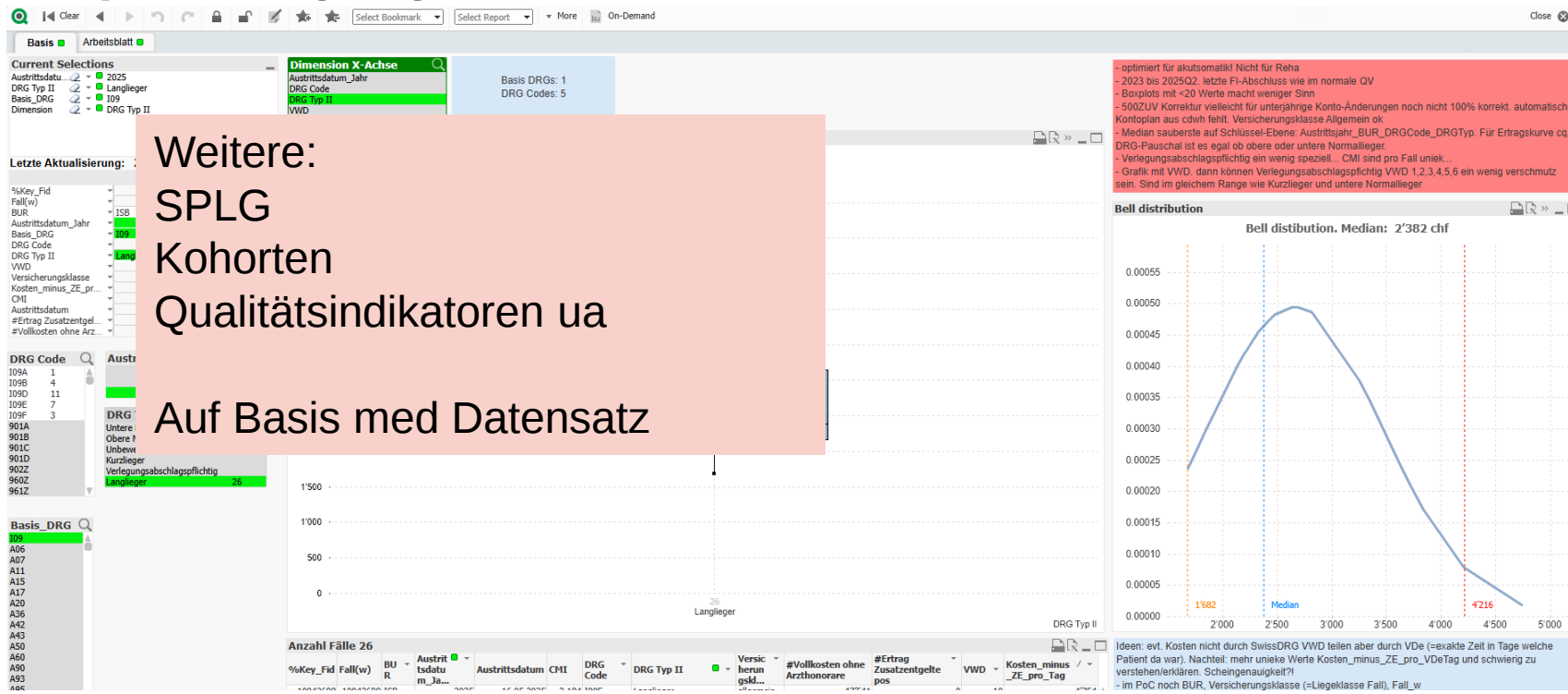
Digitalisierungsstrategie
Insel Gruppe

DRGs für Planung und Reporting

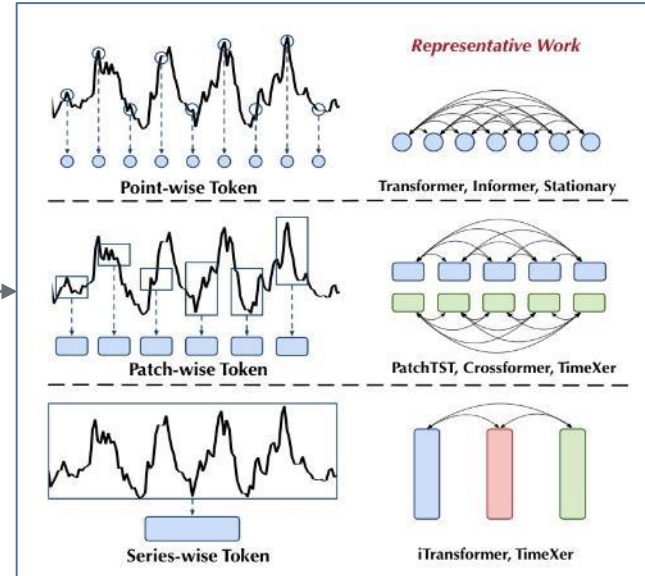
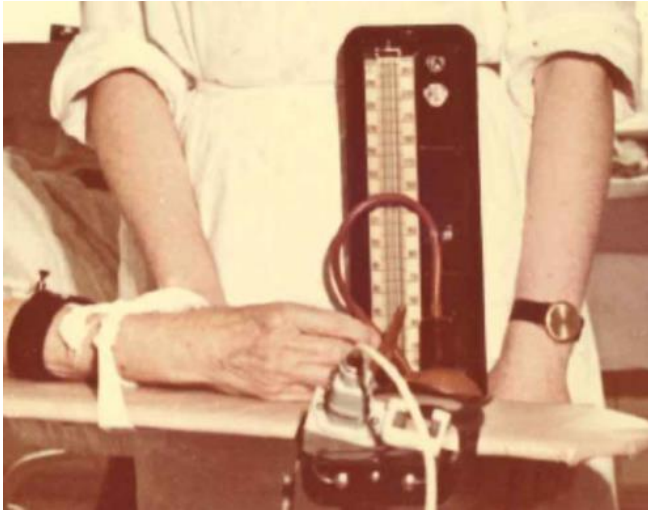


Antragsverfahren - Verteilung auf Knopfdruck

Beispiel Langlieger



Und die medizinischen Daten!.....?



Large Time Series Models
<https://doi.org/10.48550/arXiv.2407.13278>

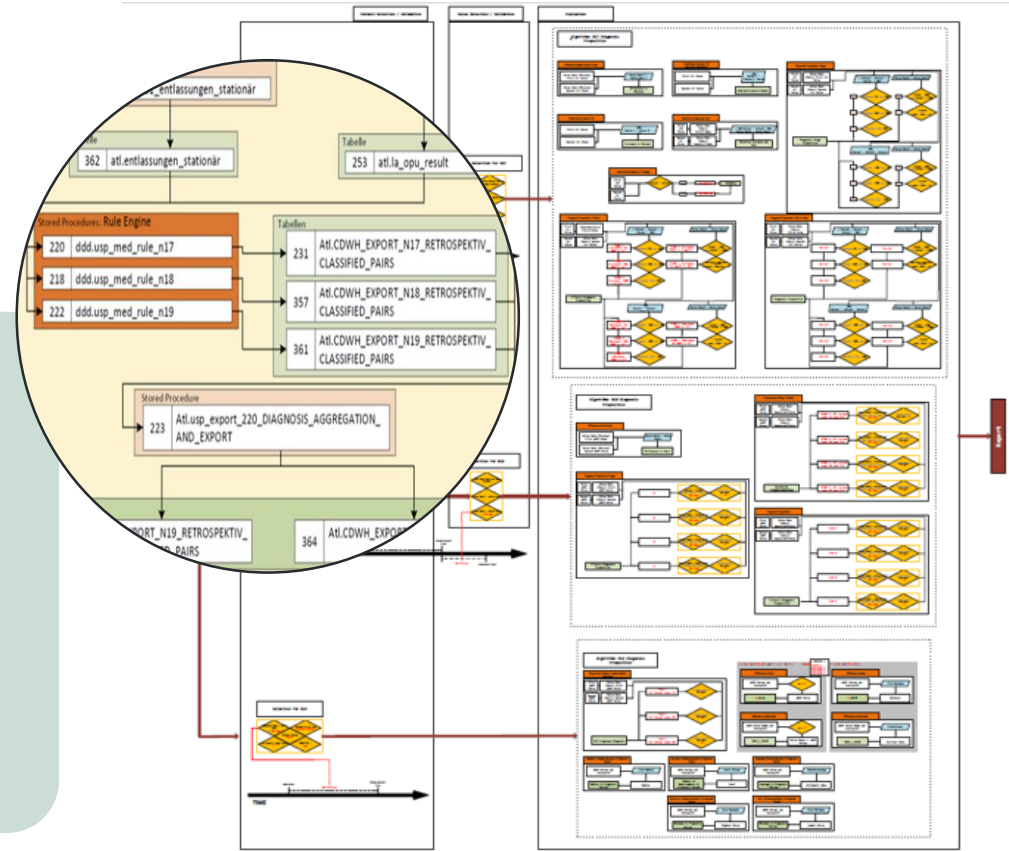
Brückenschlag inhouse Entwicklung

Data Driven Diagnosis (DDD)
is a rule based SQL Algorithm

Based on KDIGO Guidelines

Individual Baseline per Patient

Output: ICD 10 - N19, N18, N17



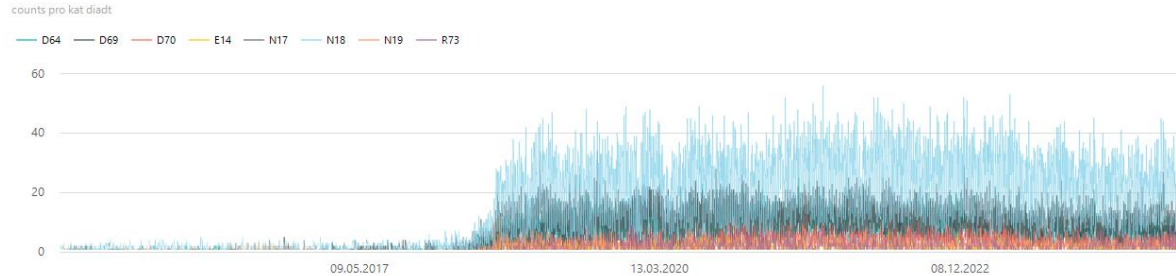
Kidney Disease: Improving Global Outcomes (KDIGO) <https://kdigo.org/>

Anbindung externer Quellen

DDD-generierte Diagnosen

DRG + CDC

- Niereninsuffizienz
- Diabetes
- Neutropenie, Anämie
- Sepsis
- Multiresistente Erreger



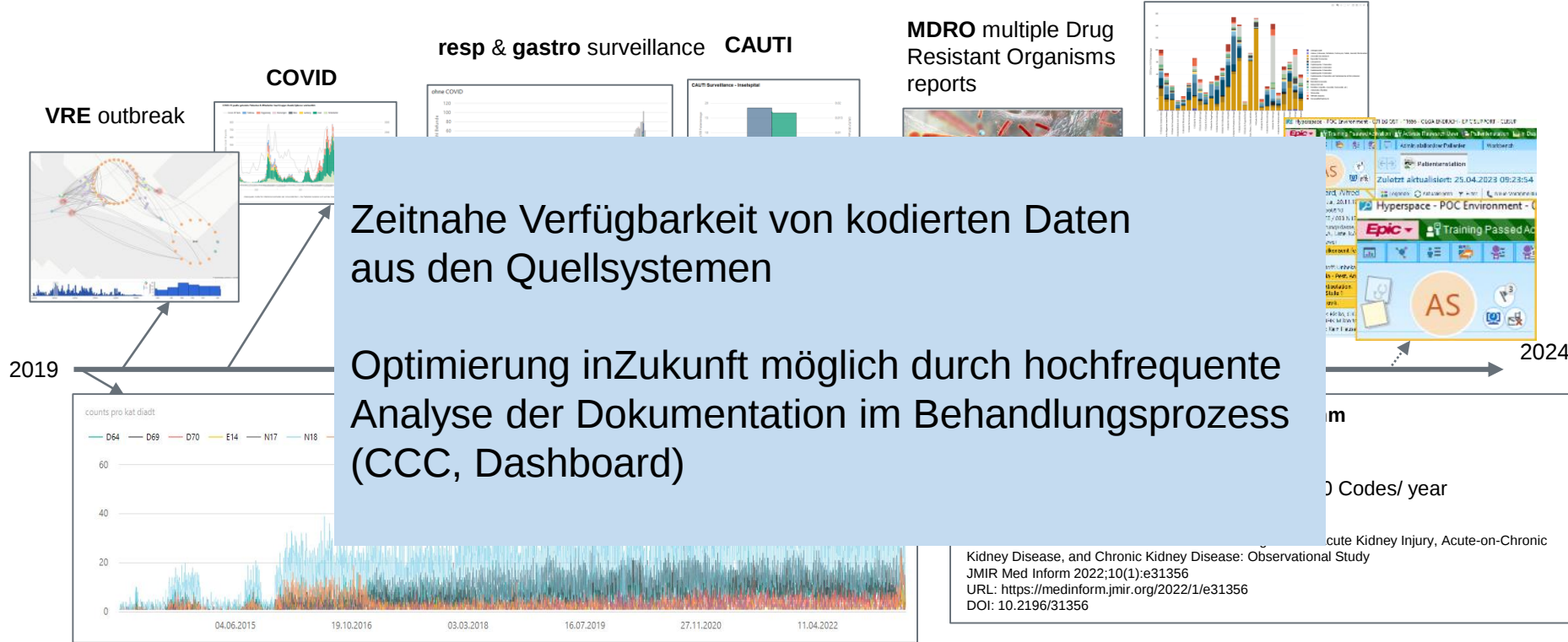
Kodierte Diagnosen 2014 - 2024

2017

Erlösicherung & Mehrerlös ca 2.5 - 4 Mio CHF jährlich

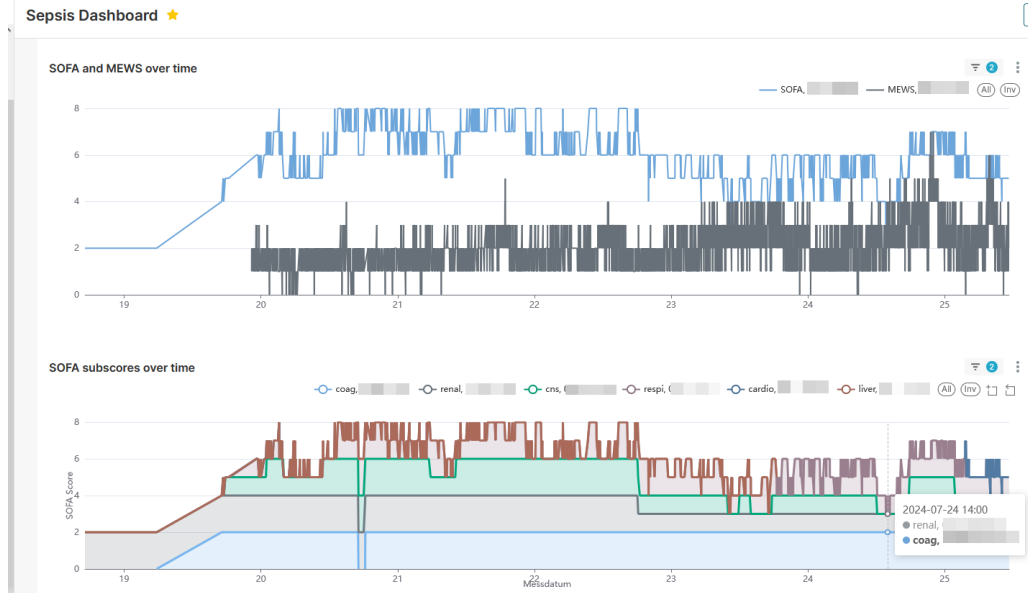
Reports mit Bezug zu Kodierdaten

Roadmap 2019 – 2024 eSurveillance



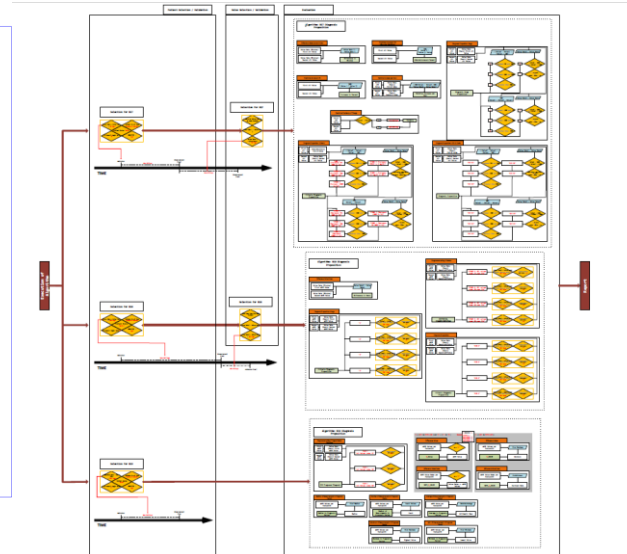
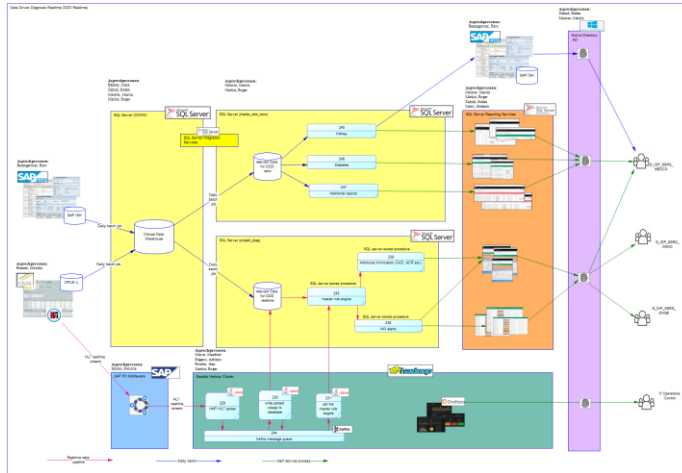
Near-Real Time Dashboard for early Sepsis Detection

Temperature, Blood Culture, Antibiotics



- Dynamische SOFA Scores + klinische Parameter
- PreEpic und Epic Fälle (2022 – heute)
- Data Driven Diagnosis Pipeline zum Kodierarbeitsplatz

IT-Architektur & Algorithmus KDIGO



[Real-world Health Data and Precision for the Diagnosis of Acute Kidney Injury, Acute-on-Chronic Kidney Disease, and Chronic Kidney Disease: Observational Study - PubMed \(nih.gov\)](#)

Key Elements of the Implementation Pipeline

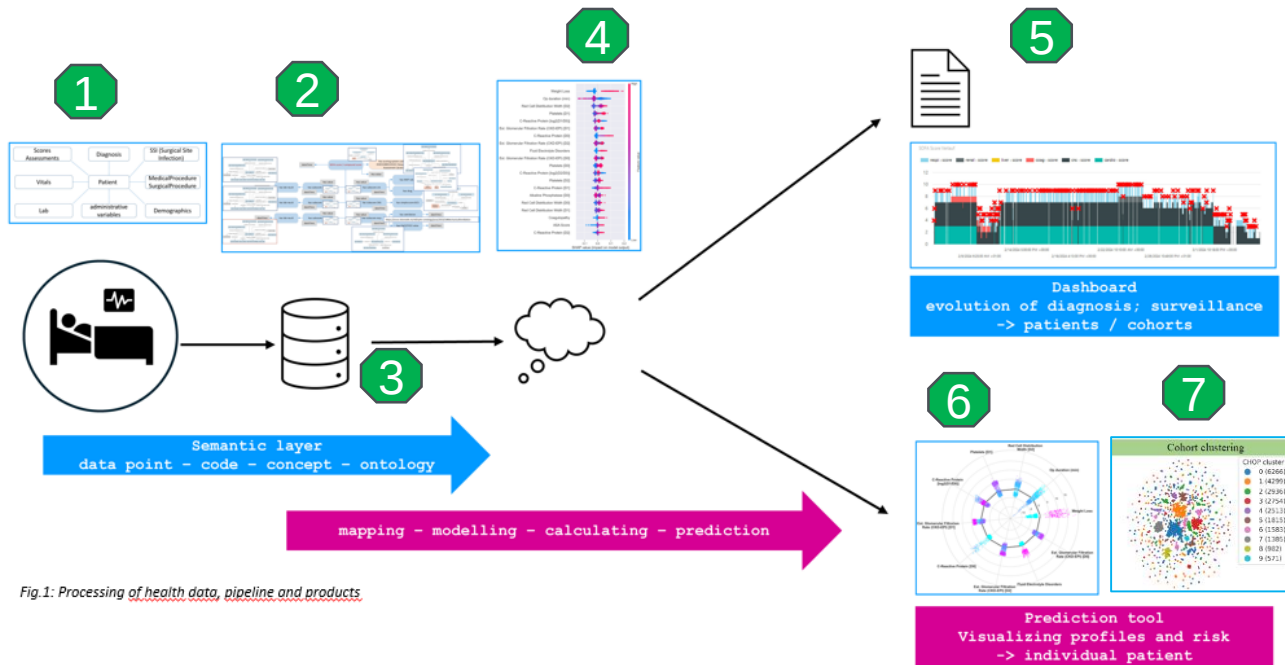


Fig.1: Processing of health data, pipeline and products

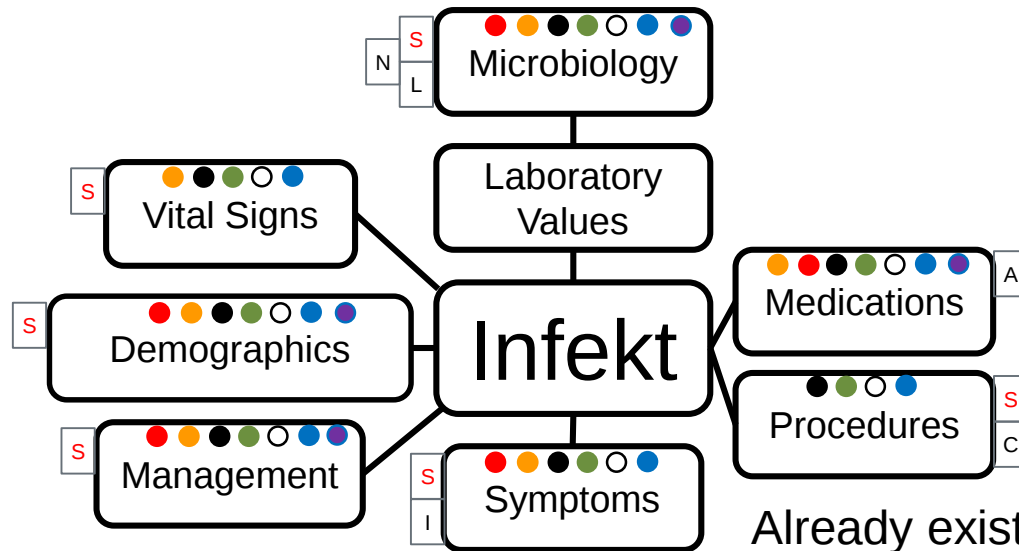
Unterschiedliche Klassifikationen und Terminologien

Projects:

- ABS → ●
- CAUTI → ●
- CLABSI → ○
- VRE → ●
- COVID-19 → ●
- CRP Projekt → ●
- eS_Reports → ●

Terminologies:

- **SNOMED** → S
- LOINC → L
- ICD-10 → I
- ATC → A
- CHOP → C
- (NCBI → N)



Already existing projects:
 COVID
 Registries
 Multidrug-resistant bacteria

Output Forschung und Clinical decision support



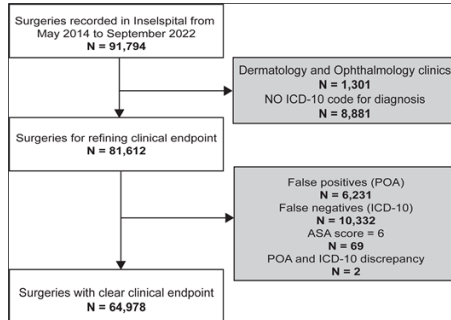


Capturing infections on the fly

INFRA – INFection Radar:

A forecast for surgical side infections based on routine health data



Karen Triep¹; Hugo Guillen Ramirez²; Marc Zimmerli³; Fatma Yilmaz³; Jasmine Belfrage³; Guido Beldi⁴; Christophe Gaudet-Blavignac^{5,6}; Julien Ehrensam⁵; Christian Lovis^{5,6}; Olga Endrich^{3,7}

1 Health Information Management (HIM), Medical Directorate, Insel Gruppe, Bern, Switzerland
 2 Department for BioMedical Research (DBMR), University of Bern, Switzerland
 3 Insel Data Science Center (IDSC), Inselspital, University Hospital of Bern, Switzerland
 4 Department for Visceral Surgery and Medicine, Inselspital, University Hospital of Bern, Switzerland
 5,6 Medical Information Science (SIMED), Faculty of Medicine, University of Geneva and University Hospitals of Geneva, Switzerland
 7 University Institute of Clinical Chemistry, Inselspital, University Hospital of Bern, Switzerland

