SPHN/PHRT driver project: Personalized Swiss Sepsis Study

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SPHN/PHRT Network for Personalized Swiss Sepsis Study

29.01.2019
Aim: Building infrastructure for sepsis research -> biomarkers
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University Hospital Domain
Basel, Zürich, Lausanne, Geneva, Bern

BIMS
- Intensive Care Unit
- Laboratory Tests
- Clinical Diagnosis
- Other data

Data Integration Layer (at each center)

Lausanne

SPHN Component

1

SPHN Interface
- Standard Interface
- omics / Machine Learning

Data Coordination Center (BioMedIT)
- Standards & Interoperability

Basel
- Universitätsspital Basel
- University of Basel

Zürich
- Universitätsspitäl Zürich
- Universität Zürich

Geneva
- Hôpitaux Universitaires de Genève

Bern
Aim: Building infrastructure for sepsis research -> biomarkers

SPHN Component

1. BIMS
   - Intensive Care Unit
   - Laboratory Tests
   - Clinical Diagnosis
   - Other data

Data Integration Layer (at each center)

Data warehouse

SPHN Interface

2. Standard Interface
   - omics / Machine Learning

Data Coordination Center (BioMedIT)

 portfolio

Standards & Interoperability

ETH Domain

3. Machine Learning
   - omics Technologies

ETH
How we will establish this network

**Two studies**
- **digital biomarkers**: sepsis (>10’000 patients)
- **omics biomarkers**: severe CAP (n=400)

Allow to practice/establish:
- Governance and collaboration structure
- **digital**: Data collection, transfer and analysis
- **omics**: Logistics of patient recruitment, sample collection, registration, storage and shipment, transfer of **omics** data within the network
Challenges

- **Scientific coordination**
  - Project would benefit from a full time coordinator

- **Governance**
  - Who can sign what legal document e.g. DTA?
  - Expectations e.g. publications

- **IT/Dataware house**
  - Specific expertise e.g. Snomed CT

- **Semantic**
  - More coordination
What we have achieved so far…

- **Governance**
  - Executive and scientific board
  - Publication guidelines
  - Collaboration agreement
  - Data Transfer agreement

- **Studies**
  - Agreed on content -> ethical proposal in prepare

- **CLINICAL Data Warehouse**
  - Variables for collection identified, >500 items
  - Transfer: ICU -> CDWH -> BioMedIT -> Leonhard Med
Next steps

- Check and sign all legal documents: collaboration agreement and DTA

- Submission of ethical proposal to EKNZ (lead ethics)

- Studies:
  - Start collection, transfer and analysis of data (digital biomarkers)
  - Start recruitment of patients (-omics biomarkers)
    → Delay in recruitment due to regulatory aspects
Thanks to the SPHN/PHRT Network for Personalized Swiss Sepsis Study

Personalized Swiss Sepsis Study

29.01.2019
Questions? Ideas?

- Contact:
  Any team member of the Personalized Swiss Sepsis Study

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