

STRENGTHENING SURVEILLANCE OF INFECTIOUS DISEASES IN BELGIUM (BE-SURVID)

Sciensano, the Belgian institute of Health

DIRECT GRANTS TO IMPROVE NATIONAL SURVEILLANCE SYSTEMS
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OVERVIEW BE-SURVID

2025-01-01 – 2029-12-31

Objectives of BE-SURVID

1. Digitalized surveillance systems

1. System to system data transfer
2. Automatic extraction of electronic health records
3. General practitioners, laboratories and hospitals

2. Linkage of surveillance data with other relevant data sources (clinical and epidemiological metadata, socio-demographic data, health insurance data, vaccination,...)

1. Complement data and improve data quality

3. Signal detection and modelling

4. Data governance for infectious disease surveillance in Belgium

1. (technical and legal (GDPR) elements
2. Belgian health data authority and the European health data space

Introduction of Work Packages (WPs)

WP1: Coordination, Communication and Dissemination

WP2: Digitalized
Surveillance

WP3: Integrated
Surveillance

WP4: Signal
detection &
Modelling

WP5: Data Governance

WP6: Sustainability and Evaluation

Main contact persons

Coordination

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WP2 - Digitalized Surveillance

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INTEGRATED USE OF ELECTRONIC HEALTH RECORD DATA ACROSS HEALTHCARE LEVELS

Cfr. WP2 - Digitalized Surveillance

Integrated use of Electronic Health Record data across healthcare levels - overview

1. Surveillance at three levels:
 - General practitioners (Infection barometer)
 - Laboratories (EpiLabo)
 - Hospitals (SARI network)
2. System to system data transfer
3. Secondary use of electronic health records (automated extraction)
4. Higher data quality and pandemic preparedness

GP syndromic surveillance system

1. Characteristics:

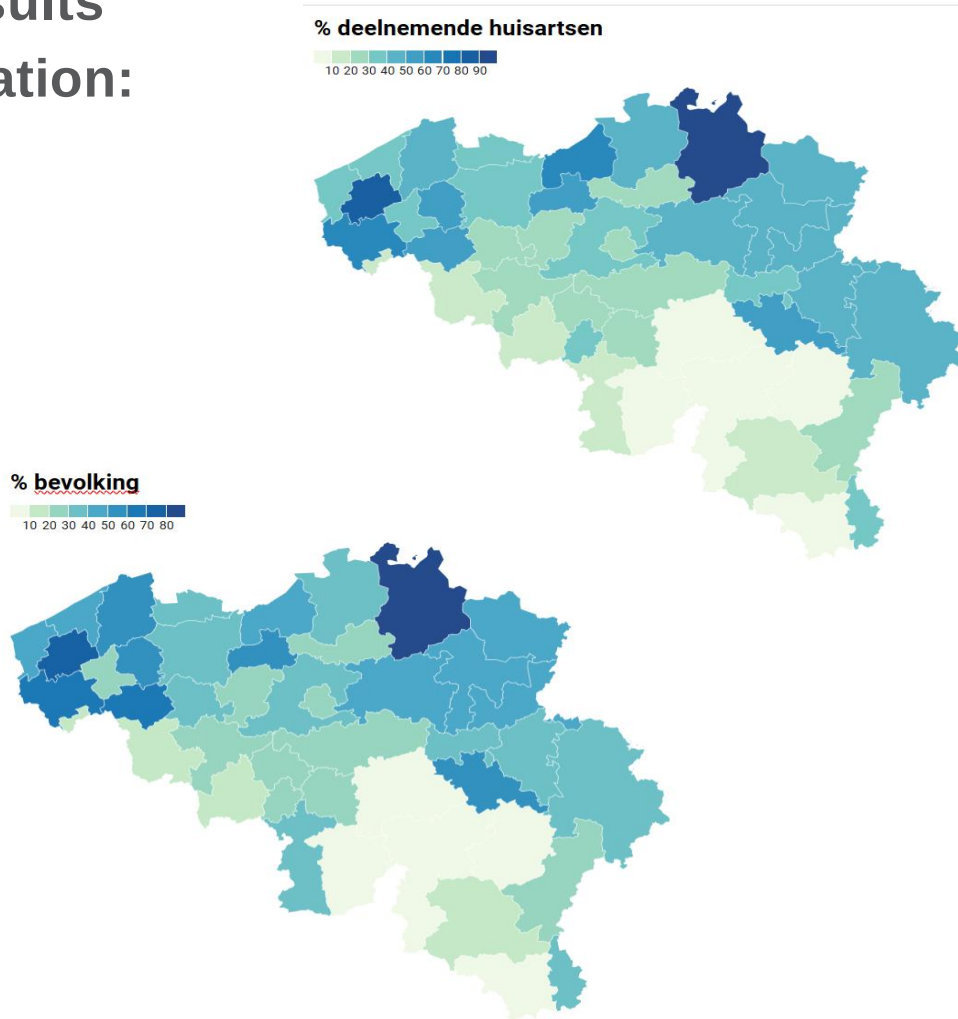
- syndromic surveillance system
- real-time (daily)
- electronic health records of general practitioners – *aggregated data*

2. Implementation ongoing, validation foreseen 2025

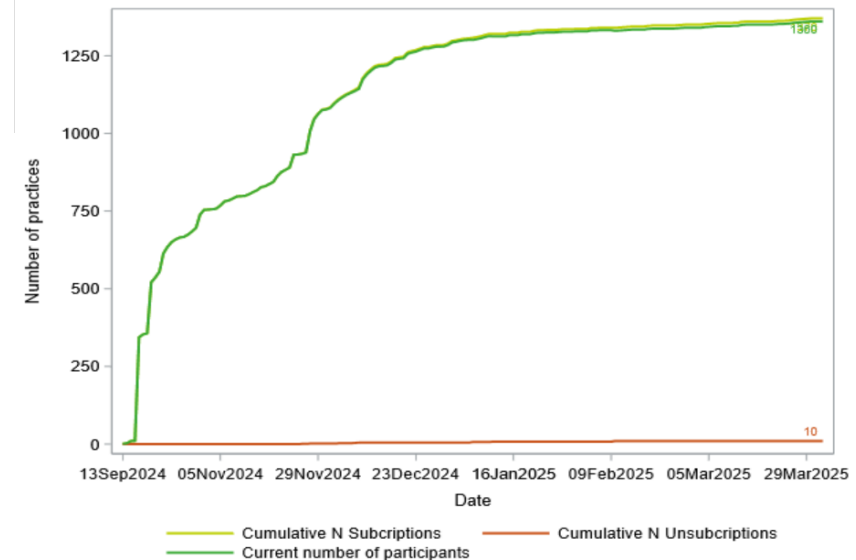
3. Expected outcome: operational surveillance for respiratory (ARI, ILI) syndromes and acute gastroenteritis syndromes with concrete output in reporting (e.g. weekly for respiratory)

GP syndromic surveillance system

1. First results participation:



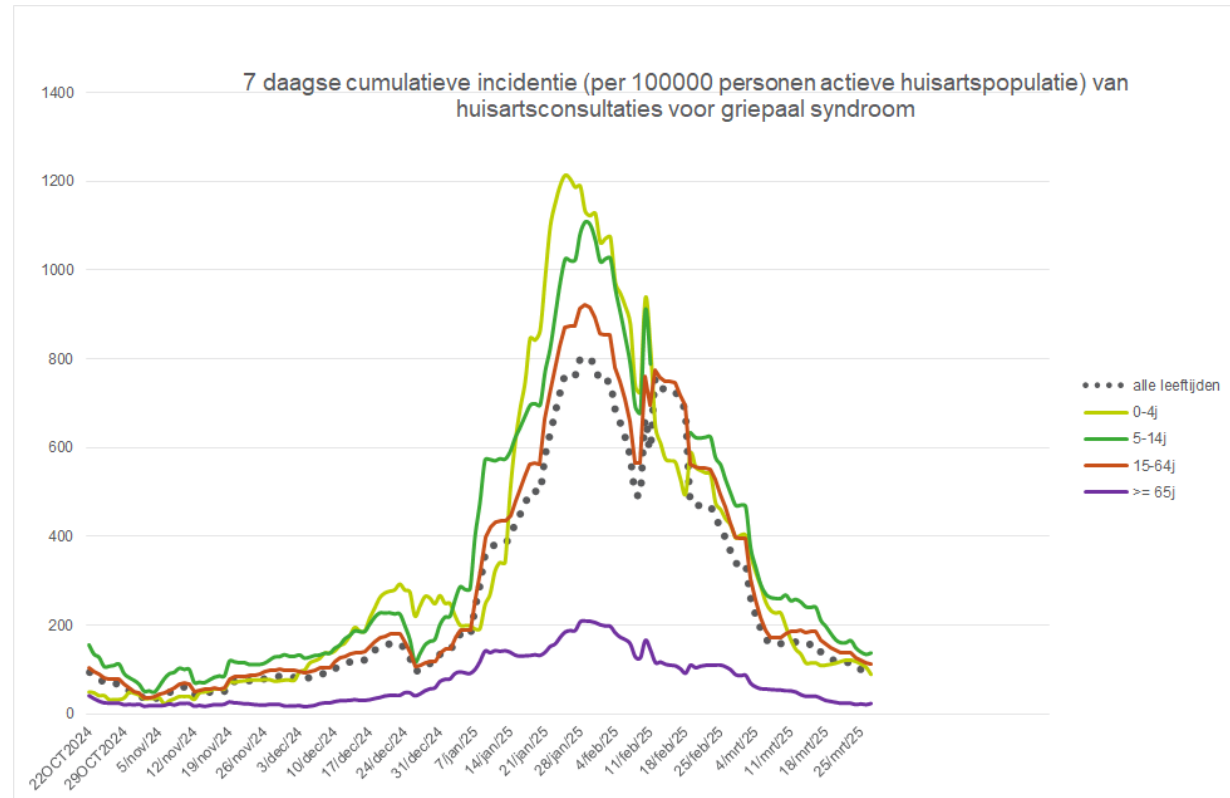
- 1360 practices
- 4192 GPs
- 4 000 000 “active” patients (estimation)
- 1 software package (out of 7)
- Need for some political leverage



GP syndromic surveillance system

Current stage:

- 'Recruiting' software providers
- Data validation
(e.g. flu syndrome)



Laboratories - Epilabo 2.0 surveillance

1. Characteristics:

1. test results of clinical microbiology laboratories
2. real-time surveillance system
3. *pseudomonized case based data using the national registry number*

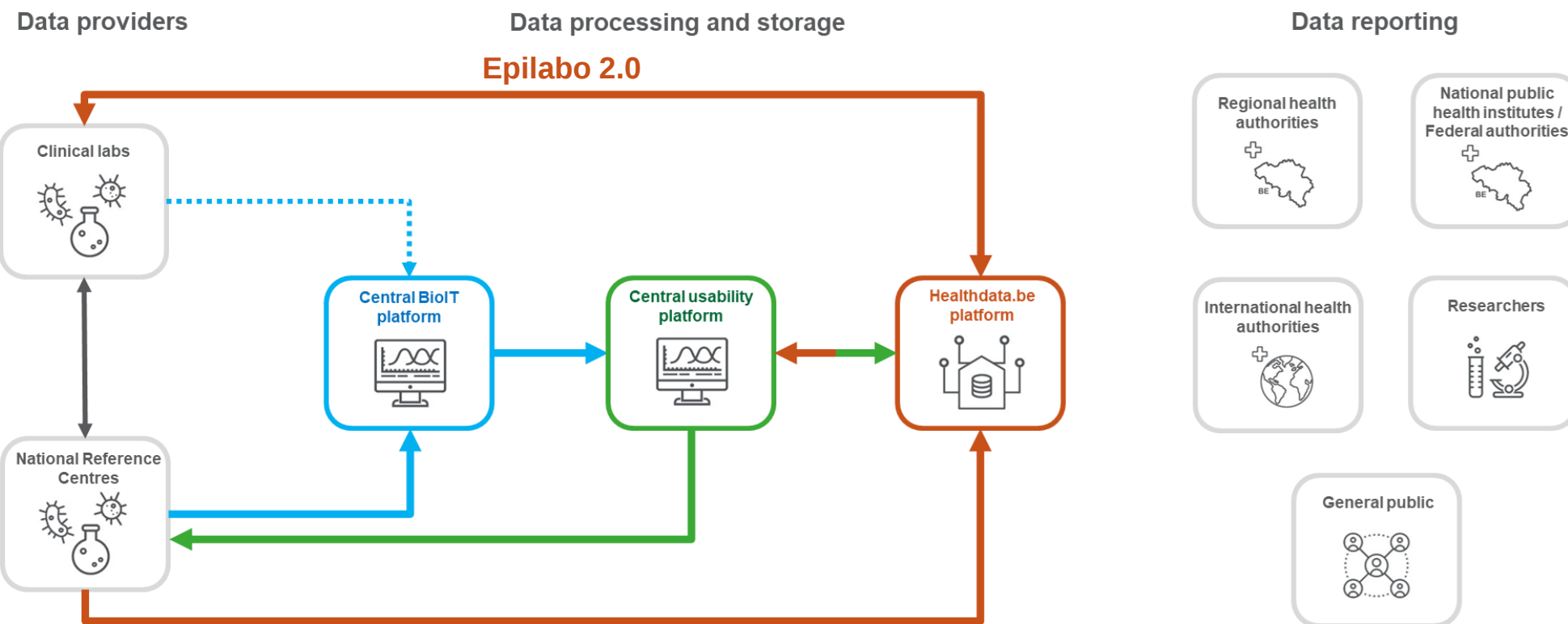
2. Outcome: technical roll-out of Epilabo 2.0 with onboarding laboratories and concrete use for surveillance in 2026 (*link WP3 and WP4*)

Context of an updated data collection: Epilabo 2.0

- **Experience COVID-19 pandemic**
- **EU-HIP project*** (EU funded project)
 - Towards interoperable IT health systems across member states (*HERA's IT platform, i.e. ATHINA*)
 - Develop IT health systems of the member states in a pandemic preparedness context
- **be.Prepared initiative** (EU funded project)
 - Overarching infrastructure to collect and replicate data (clinical, epidemiological and genomic) across stakeholders
 - Proof-of-concept with National Reference Centre data
 - Further development as recommendation in ECDC PHE Preparedness Assessment for Belgium, 2024

Context of an updated data collection: Epilabo 2.0

be.Prepared: Belgian Preparedness Architecture for Infectious Diseases



Legend data flows:

- Out of scope
- Genomic data
- Clinical/epidemiological data
- Combined genomic and clinical/epidemiological data

Epilabo 2.0: key features

- **Automatized electronic reporting:** individual Laboratory Test Results are sent in a structured manner
- **Scalability and flexibility:** limited data collection that can be used for multiple / newly emerging pathogens
 - ✓ Structured in data collection definition (DCD) as a generic model, but updates possible when required
 - ✓ Pandemic preparedness through use of broader clinical concepts and potential to scale up quickly (which may be activated when necessary)
- **Interoperability:** common reference standards for data reporting
 - ✓ Use of SNOMED-CT/LOINC codes (generic terminology)
 - ✓ Use of defined clinical concepts (generic across different data collections)
 - ✓ Use of FHIR in the future (generic technical structure of data reporting)

Challenges

- Coordinate and meet objectives of multiple partners
 - Epidemiology of infectious diseases
 - Healthdata.be
 - Laboratories
 - Regional health authorities
- Legal framework (data transfers between stakeholders, roles of the different partners, nominative data collection, data ownership)
- New technical requirements for laboratories
- Enabling data linkages with other health databases

Hospitals - SARI surveillance

- Digitalized SARI surveillance system, combining:
 - Test data from National Reference Centres (NRC)
 - Test data from Clinical laboratories (CL) and
 - Epidemiological data of SARI cases
- Pseudonymized case-based data (national registry number)
- Build on EU-HIP and be.Prepared projects
- Outcome: implementation by NRC & SARI hospitals and concrete use for surveillance in 2026 (*link WP3*)

Contact

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Scan for more information

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