

NEUROSURV

*VLAAMSE VERENIGING VOOR NEUROLOGIE –
HERFSTVERGADERING*

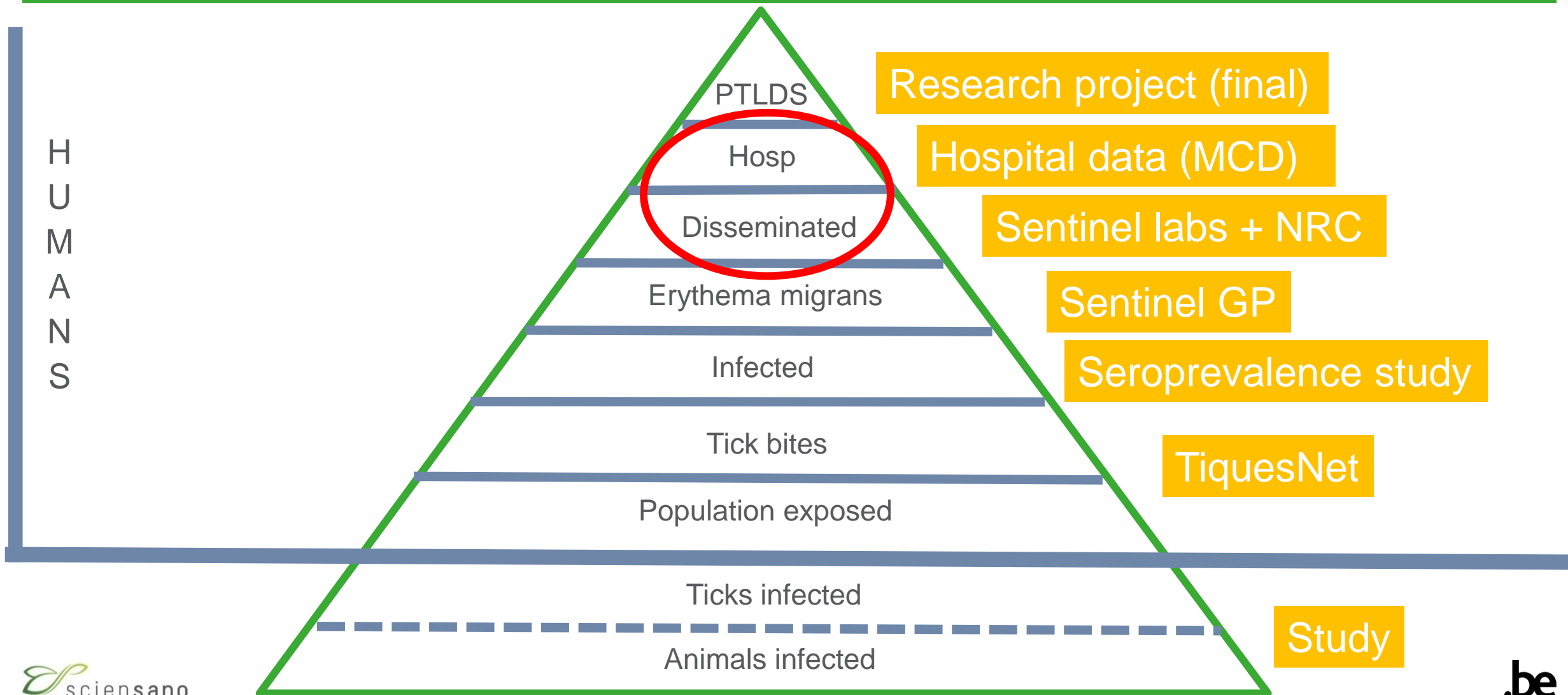
12/10/2024

Agenda

- A glance at **Lyme neuroborreliosis** (LNB), **tick-borne encephalitis** (TBE) and **acute flaccid paralysis** (AFP)
- **NeuroSurv**
 - What is it?
 - Mid-year evaluation - Results
 - Participation
 - Lyme neuroborreliosis (LNB)
 - Tick-borne encephalitis (TBE)
 - Acute Flaccid Paralysis (AFP)
 - Discussion and conclusion
 - Next steps

A GLANCE AT LNB, TBE AND AFP

Surveillance tree – Lyme Borreliosis



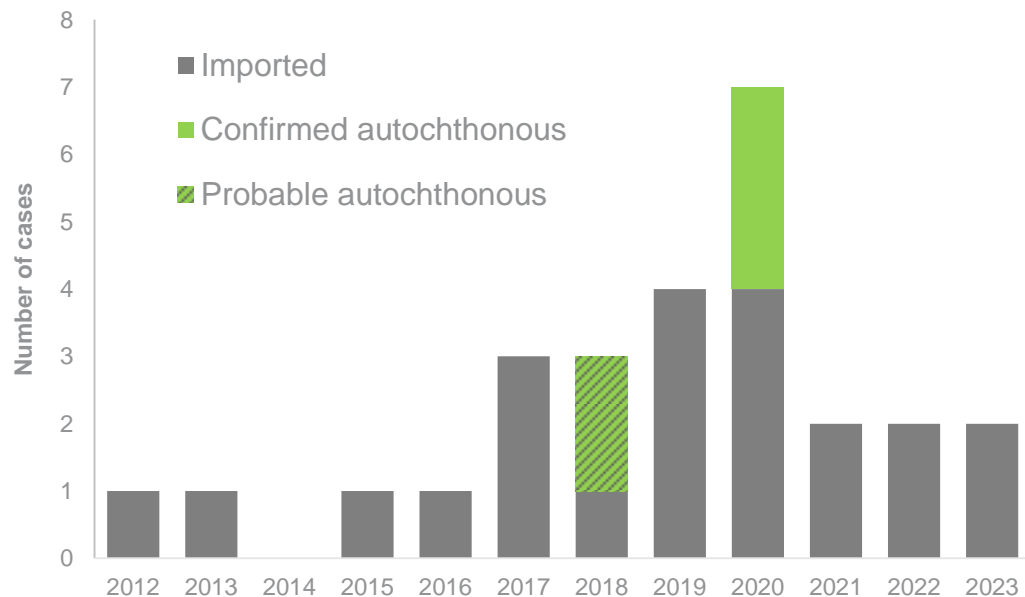
LNB - Lyme neuroborreliosis

- Since 2019, mandatory surveillance of LNB has been introduced by ECDC
 - Used as a proxy to estimate the burden of Lyme borreliosis
 - Only manifestation of Lyme borreliosis with a clear case definition
 - Exhaustive surveillance possible (low number of cases)
 - Enable comparison between EU countries
- Complex diagnosis
 - Existing Belgian surveillance networks unable to monitor LNB
 - Inability to respond to EU commission request

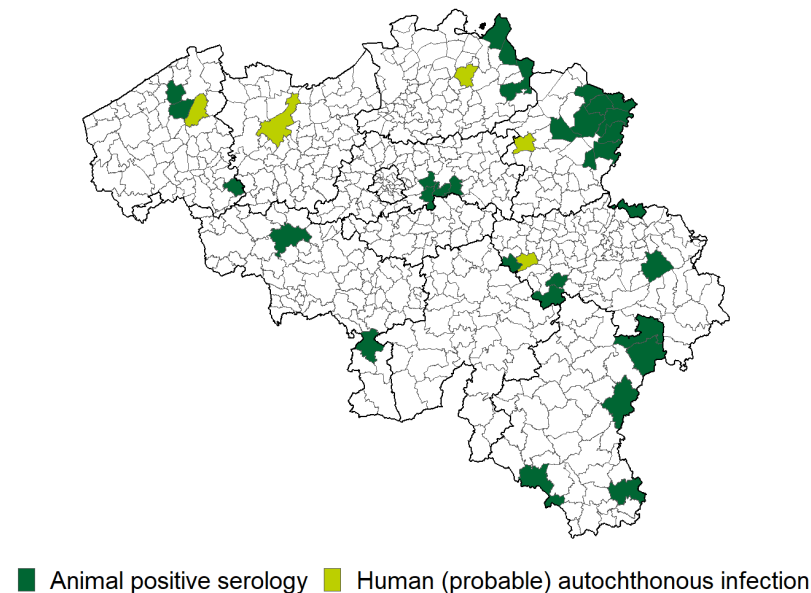
→ A new surveillance system was needed to collect data on LNB to answer the request of the EU commission

TBE – Tick-borne encephalitis

- Laboratory surveillance in Belgium
 - Reporting of positive results by the National Reference Centre for arboviruses
 - 0 to 4 imported cases per year
 - First confirmed autochthonous case in 2020

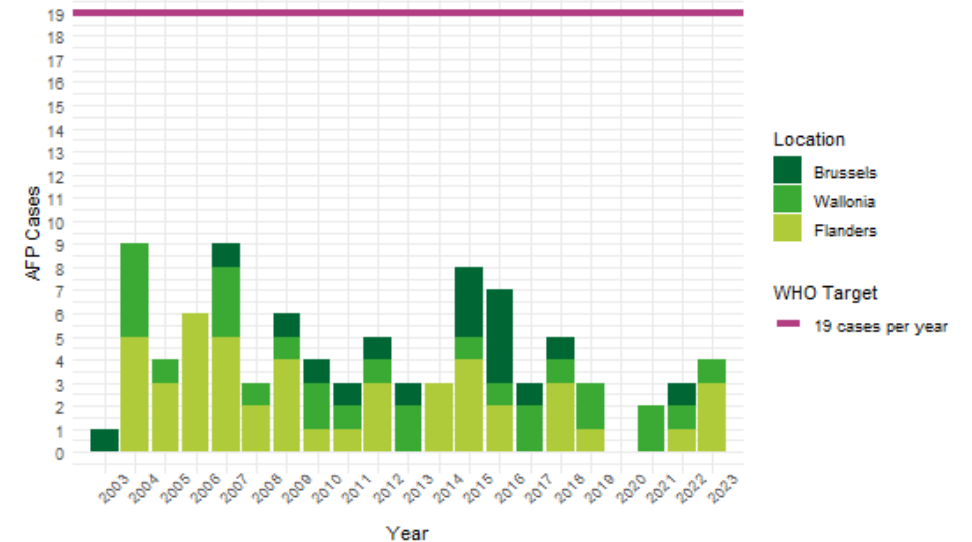


Geographical distribution of positive TBEV results in humans and animals



AFP – Acute flaccid paralysis

- Poliovirus has been eradicated in Belgium since 2002
- The risk of reintroduction has been evaluated by the WHO as “intermediate” due to poor surveillance
- In Belgium, the current surveillance system used is AFP surveillance:
 - All AFP cases under 15yo are mandatory notifiable
 - Laboratory analysis is required to exclude poliovirus
 - Surveillance system not efficient!



→ Improvements are needed before Belgium can be considered to be at "low risk" of poliovirus reintroduction and transmission

NEUROSURV

What is NeuroSurv?

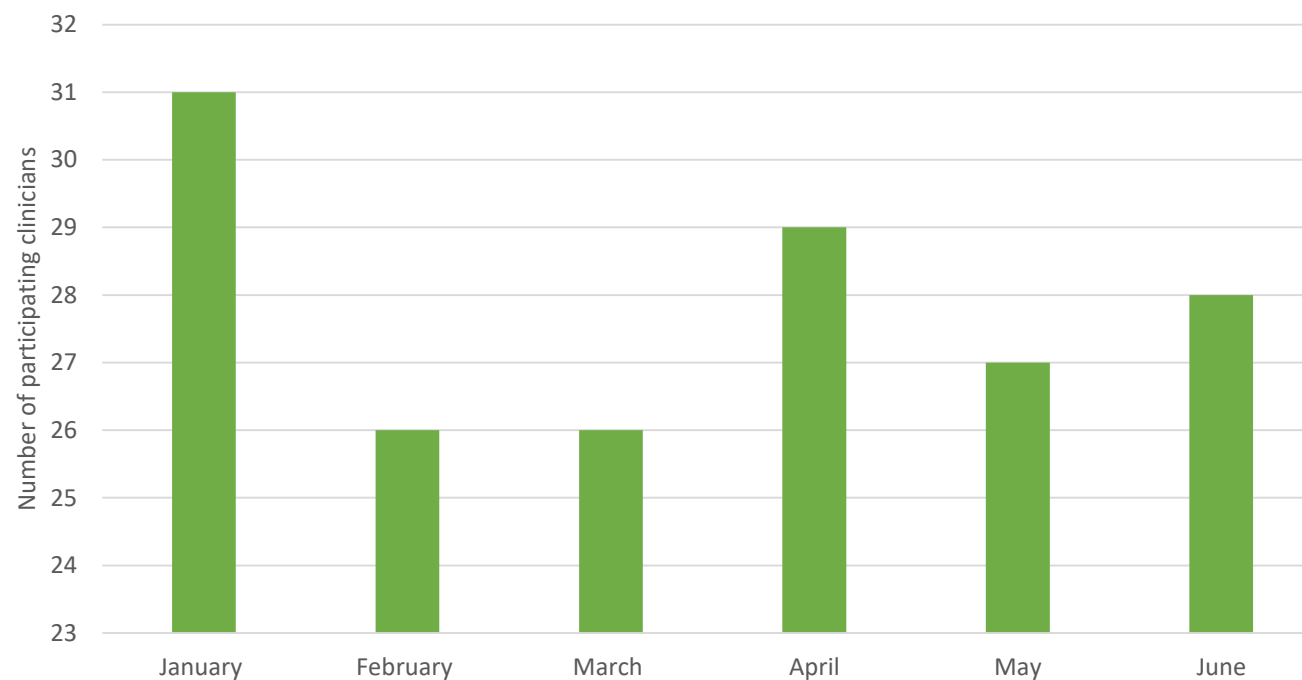
- Surveillance system for neuroinfectious diseases
- Based on voluntary participation of neurologists and paediatric neurologists
- Implemented in January 2024
- Steering committee has been established and meet once a year
- Enable to collect data on LNB to answer the request of EU commission
 - But also on TBE and AFP to better understand the burden of those diseases
- Survey sent on a monthly basis (LimeSurvey)

Mid-year evaluation – Results

- **PARTICIPATION**

- 121 hospitals contacted
- 45 hospitals accepted (37%) – representing 48 clinicians
- FL: 27 hospitals – WALL: 15 hospitals – BXL: 3 hospitals

Number of participating clinicians per month, January – June 2024

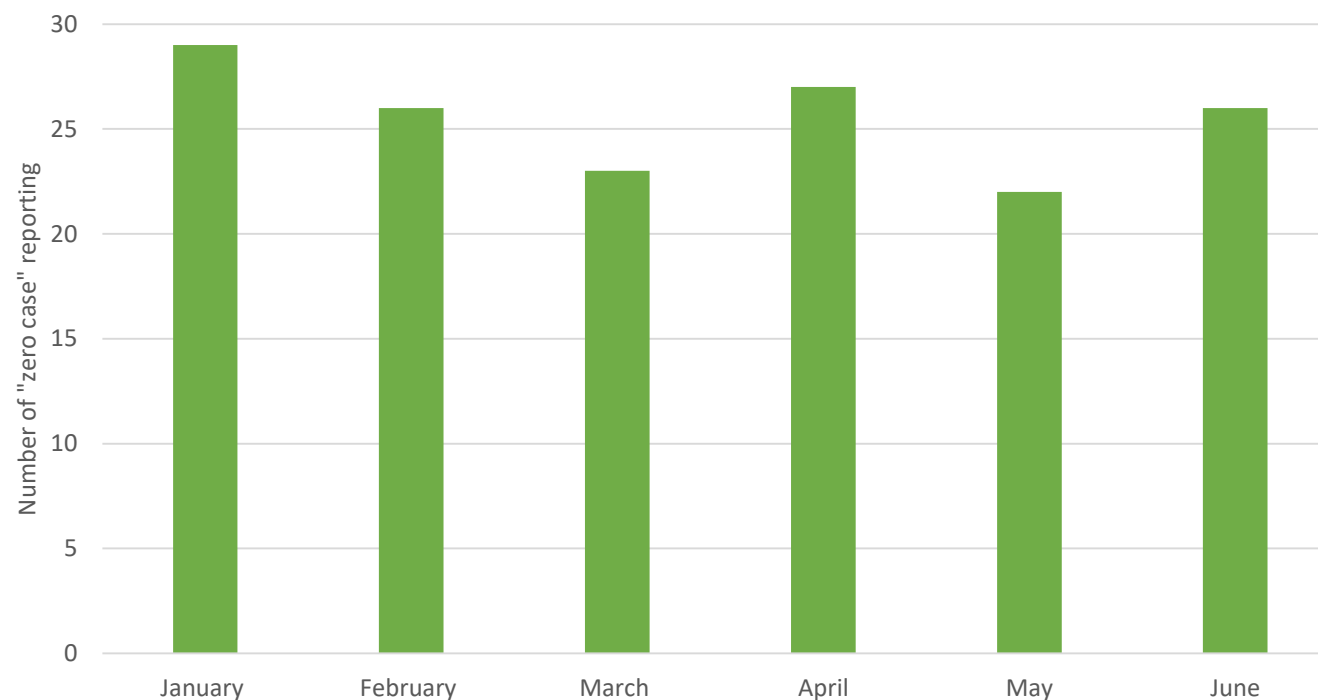


Mid-year evaluation – Results

- **PARTICIPATION**

- Average of 28 complete participations (clinicians) per month (~58%)
- Average of 26 « zero-case » reporting (clinicians) per month (~93%)

Number of “zero case” reporting, per month, January – June 2024

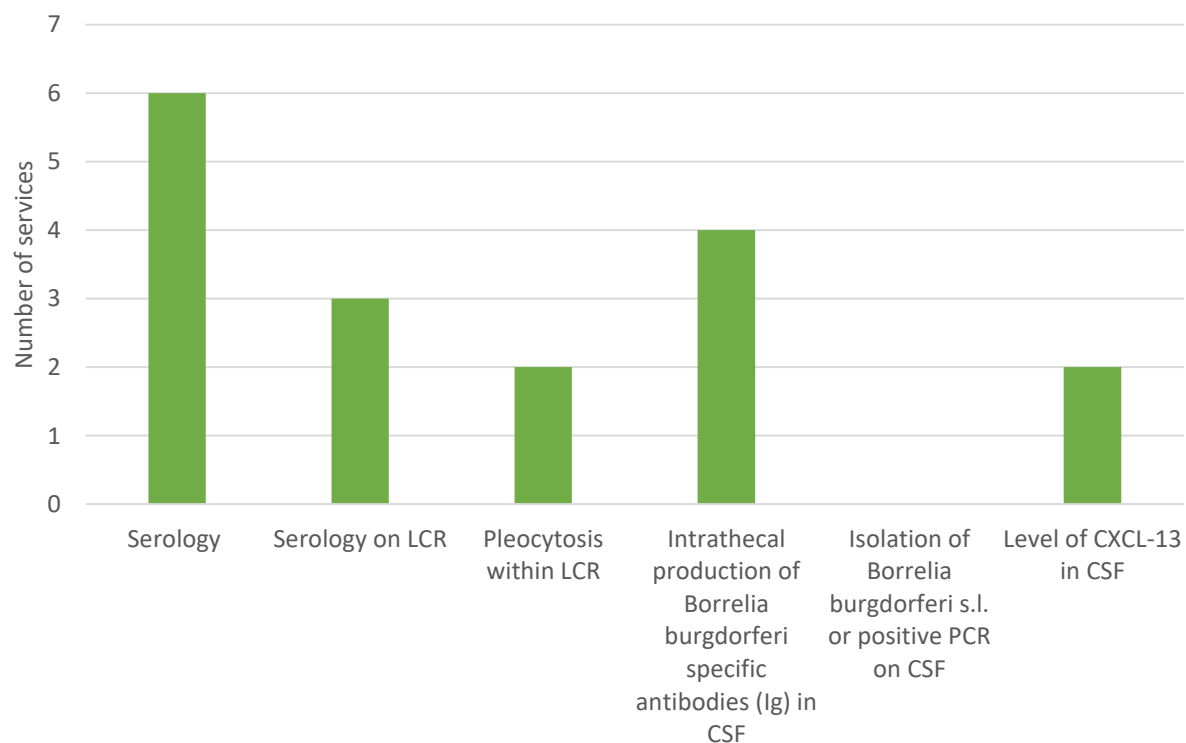


Mid-year evaluation – Results

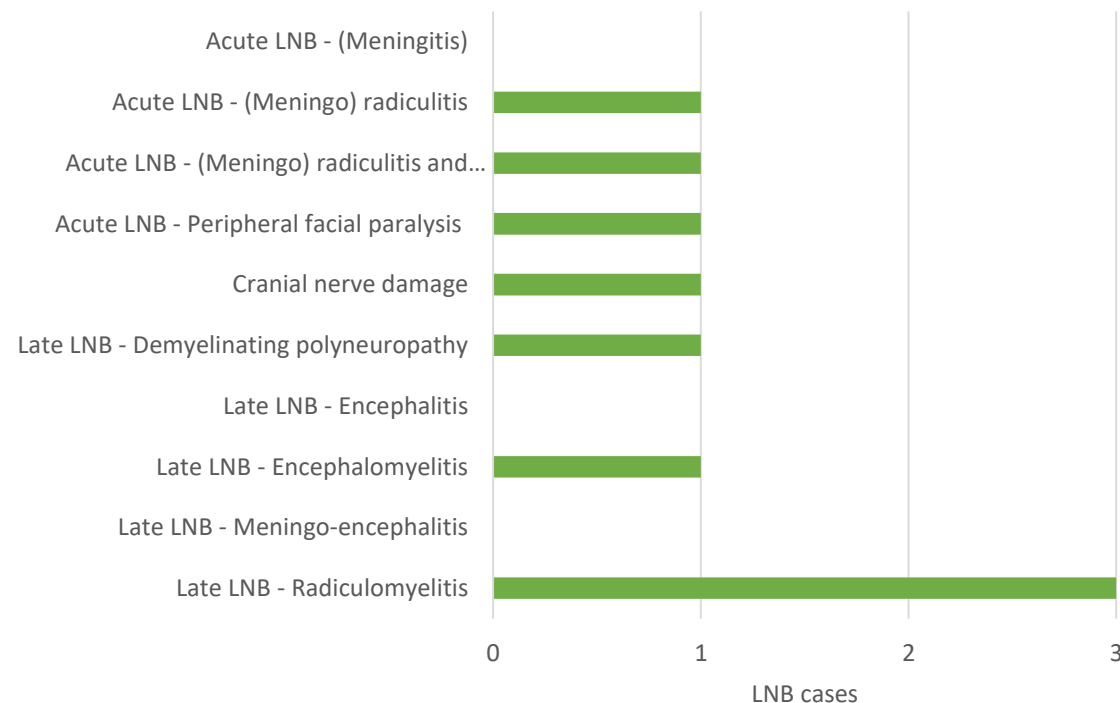
- **LYME NEUROBORRELIOSIS**

- 9 cases reported by 7 hospital services (WALL: 3 – FL: 4)

Type of LNB diagnostic tests used by services,
January – June 2024



Type of LNB clinical manifestations observed by patients,
January – June 2024



Mid-year evaluation – Results

- **LYME NEUROBORRELIOSIS**
 - Treatment:
 - 5 cases received oral treatment (56%)
 - 4 cases received intravenous treatment (44%)
 - 4 cases have been hospitalized (44%)
 - None was admitted to ICU nor died

Mid-year evaluation – Results

- **TICK-BORNE ENCEPHALITIS**

- 1 case reported by an hospital service in Flanders
- Imported case – bitten by a tick in the Black forest, Germany
- Hospitalization at ICU

- **ACUTE FLACCID PARALYSIS**

- 8 cases reported by 5 hospital services (WALL: 2 – FL: 2 – BXL: 1)
- 2 cases < 15 years old (1 male / 1 female)
 - No diagnostic laboratory tests to exclude polio
 - Reported to regional authority

Mid-year evaluation – Discussion and conclusion

- **Preliminary results** over a 6-months period
- Acceptable response rate (37%), **low average monthly participation rate (58%)**
 - Room for improvement
- Expected number of cases reported (LNB, TBE and AFP)
 - Workload for participation is low
- Only **2 patients fulfil the ECDC criteria for LNB confirmed case**
 - Lack of follow-up to diagnosis guidelines
- **Updated BAPCOC guidelines** on diagnosis and treatment of Lyme borreliosis (incl. LNB) – July 2024
<https://www.health.belgium.be/nl/news/nieuw-aanbevelingen-voor-de-ziekte-van-lyme>

What are the next steps?

- NeuroSurv will continue collecting **aggregated data** in 2025
- Collection of **case-based data** is foreseen for 2026
- Need to **improve the response rate**

We hope to be able to count on your participation!

Contact

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