



REPUBLIC OF ESTONIA  
HEALTH BOARD

# FWD AMR-RefLabCap in Estonia

## Overview of ECDC Pilot WGS study in Estonia

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# Health Board Laboratory of Communicable Diseases



# Surveillance of *Salmonella* & *Campylobacter* in Estonia

1

All positive *Salmonella* & *Campylobacter* isolates/samples are sent to NRL

2

Additional serotyping and AST is performed at NRL

3

All isolates are stored long-term at NRL

4

Sequencing is performed asap in case suspected outbreaks

# 1. Number of isolates

	2021	2022	2023	2024 Jan, Feb
<i>Salmonella</i> isolates	310	255	<b>227</b>	22
<i>Campylobacter</i> isolates	370	298	<b>354</b>	41

# 2. Number of isolates

	2021	2022	2023
<i>Salmonella</i> isolates	8	22	100
<i>Campylobacter</i> isolates	0	0	50

Aim of the pilot study – to get a more sophisticated overview of the strains circulating in Estonia

ECDC *SALMONELLA* and *CAMPYLOBACTER* WGS PR

- 100 *Salmonella* isolates – all isolates collected by mid 2023
- 50 *Campylobacter* isolates – representative selection of strains from mid 2023 (all *C.coli* ; region, age, gender)

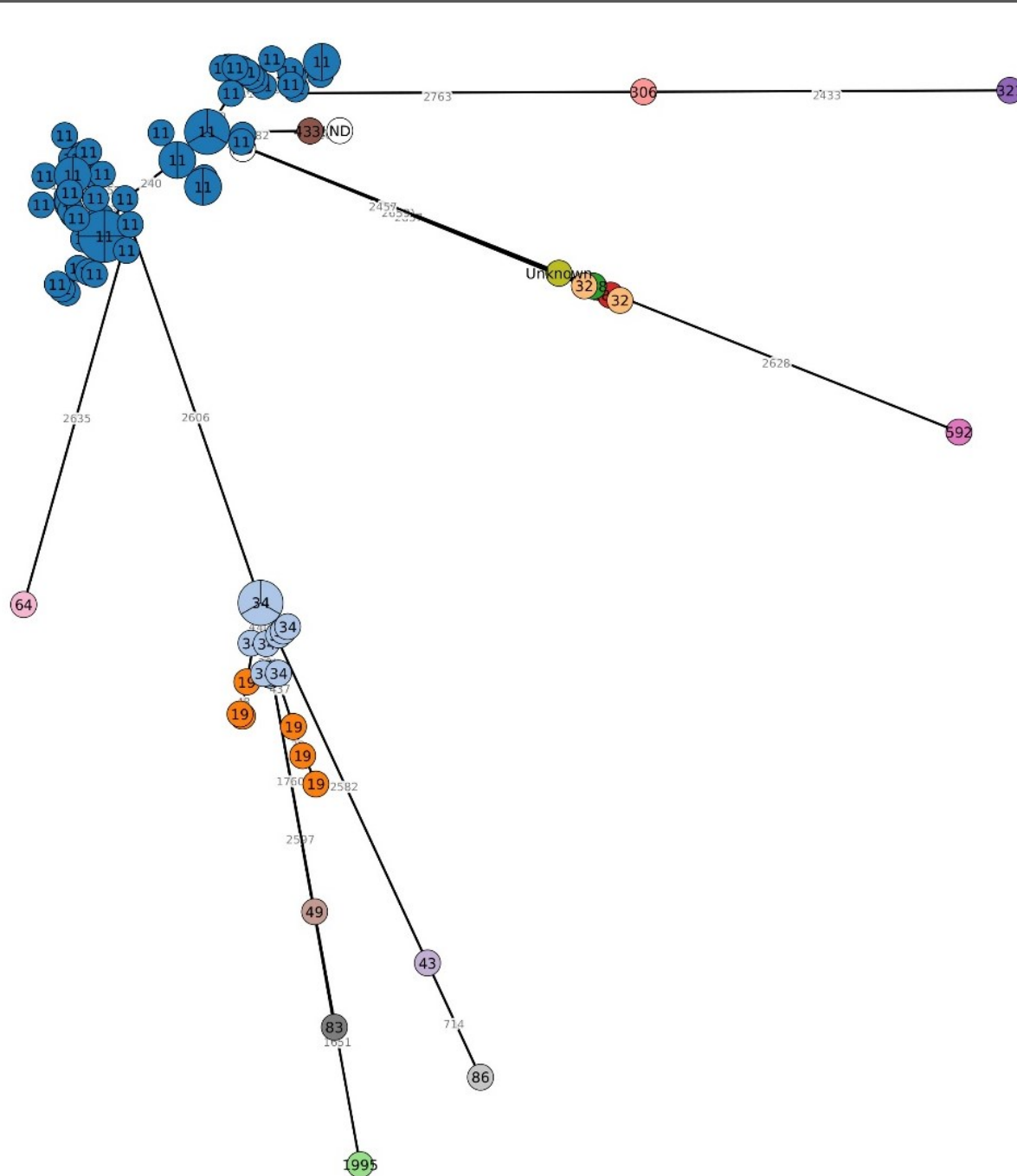
# Laboratory capacity

- Clinical Microbiology (*AST, serotyping*)
- Molecular methods – manual/automatic extraction of genomic DNA
- *WGS (sequencing temporarily outsourced in-house)*





# SALMONELLA WGS RESULTS MSTree

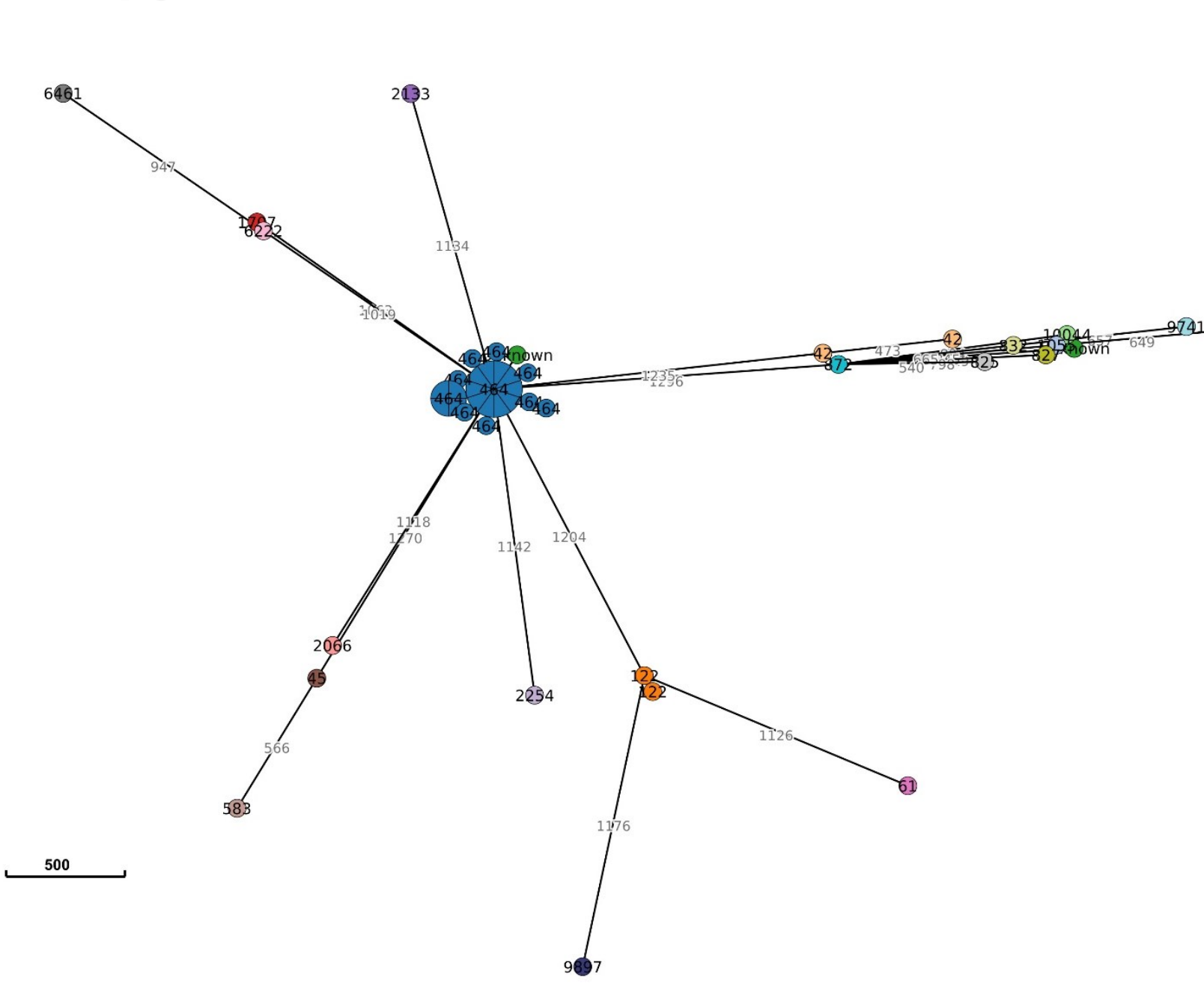




# Campylobacter WGS RESULTS

Name	Species	ST	Gene symbol	Sequence name
NG-A0362	Campylobacter jejuni strain CJ071CC464, complete genome	464	tet(O)	tetracycline resistance ribosomal protection protein Tet(O)
			50S_L22_A103V	Campylobacter macrolide resistant 50S L22
			gyrA_T86I	Campylobacter quinolone resistant GyrA
			blaOXA-193	OXA-61 family class D beta-lactamase OXA-193
NG-A0362	Campylobacter jejuni subsp. jejuni strain GB19 chromosome, complete genome	61	blaOXA-193	OXA-61 family class D beta-lactamase OXA-193
NG-A0362	Campylobacter jejuni strain CJ515CC45, complete genome	45	blaOXA-184	OXA-184 family class D beta-lactamase OXA-184
NG-A0362	Campylobacter jejuni strain CJ071CC464, complete genome	464	50S_L22_A103V	Campylobacter macrolide resistant 50S L22
			gyrA_T86I	Campylobacter quinolone resistant GyrA
			blaOXA-193	OXA-61 family class D beta-lactamase OXA-193
			tet(O)	tetracycline resistance ribosomal protection protein Tet(O)
NG-A0362	Campylobacter jejuni subsp. jejuni S3, complete genome	2133	blaOXA	OXA-61 family class D beta-lactamase
NG-A0362	Campylobacter jejuni strain CJ071CC464, complete genome	464	tet(O)	tetracycline resistance ribosomal protection protein Tet(O)
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# Campylobacter WGS RESULTS MSTree



- 464 [22]
- 1055 [2]
- 122 [2]
- 42 [2]
- Unknown [2]
- 10044 [1]
- 1707 [1]
- 2066 [1]
- 2133 [1]
- 2254 [1]
- 45 [1]
- 583 [1]
- 61 [1]
- 6222 [1]
- 6461 [1]
- 825 [1]
- 827 [1]
- 832 [1]
- 872 [1]
- 9741 [1]
- 9897 [1]

- ### ST
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500

# Plans for actions

Cooperation with epidemiologists

Cooperation with vet.lab

Wider analysis on the possible cluster

Reporting to EpiPulse



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Thanks for listening  
Any Questions?

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