

19 September 2023 09:00-18:00 (Helsinki time)  
Minutes agreed on 13 December 2023

**Location:** European Chemicals Agency (ECHA) conference center, Helsinki and Webconference (Webex)

**Attendees:**

- Network Participants:
  - Public Health: ECDC's Food- and Waterborne Diseases and zoonoses Network (FWD-Net)
  - Food Safety: EFSA's Zoonoses Monitoring data Network (subgroups on WGS and foodborne outbreaks)

Country	Name <sup>1</sup> - Public Health	Name – Food Safety
Austria	Ingeborg Lederer* Ariane Pietzka* Ulrike Orendi* Christian Kornschober* Sandra Köberl-Jelovcan* Sabine Maritschnik*	Peter Much Juliane Pichler*
Belgium	Florence Crombe* Heleen Masset Mattheus Wesley Dieter Van Cauteren	Vera Cantaert
Bulgaria	Rositsa Stoyanova Maria Pavlova	
Croatia	Ana Gverić Grginić* Hrvojka Janković*	Dražen Knežević Brigita Hengl
Cyprus	Aristos Aristodemou	
Czech Republic	Renata Karpíšková* Michaela Špačková Daniel Ondřej	Jana De Sousa Trépa Magalhaes* Lenka Bartošová* Veronika Vlasáková*
Denmark	Eva Møller Nielsen* Charlotte Kjelsø* Susanne Schjørring Steen Ethelberg Luise Müller* Egle Kudirkiene*	Marianne Sandberg
Estonia	Kairi Tõnsau* Jevgenia Epstein	Annika Vilem* Brita Smitt*
Finland	Ruska Rimhanen-Finne Saara Salmenlinna	Taru Lienemann Annika Pihlajasaari
France	Philippe Lehours* Cyril Savin* Nathalie Jourdan-Da Silva Mathieu Tourdjman	Renaud Lailier Françoise Gauchard*
Germany	Raskit Lachmann*	Thomas Schewe

MEETING MINUTES – 19 September 2023

4<sup>th</sup> ECDC's FWD Network and EFSA's Zoonoses Network Joint Meeting

	Julia Enkelmann Hendrik Wilking	
Greece		Michael Polemis Theologia Sideroglou* Anthi Chrisostomou*
Hungary	Eszter Mezei Tünde Mag	
Iceland	Hjördís Harðardóttir*	Vigdís Tryggvadóttir Brigitte Brugger*
Ireland	Aoife Colgan-Young Patricia Garvey Martin Cormican	Lisa O'Connor Patricia Garvey Brian Byrne* William Byrne*
Italy	Laura Villa* Antonietta Gattuso* Claudia Lucarelli* Fabrizio Annibali Michele Luca D'Errico Aurora García-Fernández*	Adriano Di Pasquale Cesare Camma' Francesca Cito*
Latvia	Solvita Selderina*	Tatjana Ribakova*
Liechtenstein	Esther Walser-Domjan*	
Lithuania	Galina Zagrebnevienė* Lina Savukynaite* Giedrė Aleksienė Algirdas Griškevičius	Simona Pileviciene* Snieguole Sceponaviciene*
Luxembourg	Telma Velez* Joël Mossong	
Malta	Christopher Barbara*	Maria louise Borg* Rosa Lucarelli*
Netherlands	Maren Lanzl* Maaïke Van Den Beld Ingrid Friesema	Ife Slegers - Fitz-James Linda Verhoef Joost Stassen* Susanne Van der Grein*
Norway	Heidi Lange Brandal Lin Thorstensen	Jannice Schau Slettemeas Camilla Sekse Taran Skjerdal*
Poland	Katarzyna Zacharczuk* Katarzyna Piekarska* Tomasz Wolkowicz	Piotr Polański*
Portugal	Mónica Oleastro* Ângela Pista* Jorge Machado* Catarina Marques* Elisabete Serrada Joana Moreno	Vítor Borges Sara Isabel Rodrigues Godinho*
Romania	Lavinia Cipriana Rusu Daniela Cristea	Ioana Neghirla*
Slovak Republic	Dagmar Gavačová* Martin Sojka	Marta Bedriova
Slovenia	Marija Trkov Eva Grilc#	Bojan Papić Eva Grilc# Jana Avberšek* Maja Kokalj* Maja Bajt*
Spain	Carmen Varela Martinez*	Isis Fajardo

MEETING MINUTES – 19 September 2023  
4<sup>th</sup> ECDC's FWD Network and EFSA's Zoonoses Network Joint Meeting

	Camille Jacqueline Laura Herrera-León Silvia Herrera León	Jose Luis Saez Llorente* Soledad Collado*
Sweden	Nadja Karamehmedovic Rikard Dryselius	Wonhee Cha Robert Söderlund* Mats Lindblad*

o **European Commission/Other EU Agencies representatives:**

Laura Gillini\* (SANTE B2), Kris De Smet\* (SANTE G5), Asgeir Astvaldsson\* (EURL *Campylobacter*), Hanna Skarin\* (EURL *Campylobacter*), Valeria Michelacci\* (EURL *E. coli*), Adrien Assere (EURL *Listeria*), Angela Van Hoek\* (EURL *Salmonella*)

o **ECDC:**

Erik Alm, Áine Collins, Celine Gossner, Cecilia Jernberg, Saara Kotila, Taina Niskanen, Johanna Takkinen, Therese Westrell

o **EFSA:**

BIOHAW Unit: Valentina Rizzi, Mirko Rossi, Eleonora Sarno\*, Joana Lourenco\*

o **EFSA Contractor:**

Daniel Matkovits, Linda Hornakova, Sara Chiba\*

o **Observers:**

Heather Carleton\* (US-CDC)

\*Participation online

# representing both sector

## 1. Welcome from ECDC, EFSA and ECHA

The Chair welcomed the participants.

Apologies were received from Bulgaria, Cyprus, Hungary and Luxembourg from food safety representatives.

## 2. Adoption of agenda

The agenda was adopted without changes.

## 3. Agreement of the minutes of the 3<sup>rd</sup> Network meeting held on 16<sup>th</sup> and 17<sup>th</sup> October 2017 in Parma

The Report<sup>2</sup> of the third Joint Meeting of the ECDC's Food- and Waterborne Diseases and Zoonoses Network and of the EFSA's Zoonoses Monitoring Data Network had been previously approved on 6 September 2018 and subsequently published on the EFSA website on 19 September 2018.

## 4. Topics for discussion

### 4.1 SESSION 1 | One Health collaboration in practice (open session)

**Chairs: Cecilia Jernberg (ECDC) and Mirko Rossi (EFSA)**

The first session focused on a foodborne event that occurred since 2019, specifically an international *Salmonella* outbreak linked to sesame-based products. The session gave the

---

<sup>2</sup> [Report of the third Joint Meeting of the ECDC's Food- and Waterborne Diseases and Zoonoses Network and of the EFSA's Zoonoses Monitoring Data Network | EFSA \(europa.eu\)](#)

opportunity to present and discuss the contribution to the investigation from a national, European Union (EU) and global perspective.

Rikard Dryselius and Nadja Karamehmedovic (the Public Health Agency of Sweden) together with Mats Lindblad (Swedish Food Agency) presented the investigations carried out in Sweden starting from April 2021 and the actions taken by the competent authorities for this event that to date counts 47 human cases linked to products contaminated with 6 different *Salmonella* serotypes. They informed that bilateral and multilateral collaborations have been established with EU and non-EU countries regarding the sharing of information and sequences for further cluster analyses. The team underlined that still some challenges exist related to the fast sharing of data across sectors during an ongoing event, to the interpretation of analytical results originating from different sequencing platforms and analysis pipelines, and to difficulties on retrieving traceability information of food products from Syria, mainly because of language barrier or lack of communication.

Johanna Takkinen (ECDC) presented the EU perspective of this event explaining when the event began to be monitored and what were the subsequent steps. She said that, based on the evolution of the event and the information shared by the EU/European Economic Area (EEA) countries in EpiPulse and the ECDC's and EFSA's WGS systems, ECDC and EFSA engaged in the assessment of the event first through the production of a Joint Notification Summary (JNS) in June 2021, followed by the production of a Rapid Outbreak assessment (ROA) in October 2021. Since the publication of the ROA, additional human cases have been reported (as of June 2023, a total of 92 new infections). Examples of other communication activities of foodborne threats were also given (i.e., epidemiological updates).

Heather Carleton (US-CDC) presented the epidemiological investigations and other activities carried out in US in relation to the detection of US human cases linked to the event. She informed that CDC had established collaborations with other countries for sharing sequences. She also mentioned that, when sequences matching the outbreak reference sequence had been found in the PulseNet USA *Salmonella* DataBase, this information had been shared in EpiPulse.

ECDC underlined that an update of the ROA is not always the best approach to monitor the outbreak over time and other options, like regular case count updates on the web site, could be published instead.

EFSA underlined that, from the food safety point of view, the ROA is the only tool available to provide to the competent authorities in the involved countries a cross-sectoral and detailed overview of results of the available investigations performed that can allow food safety authorities to perform further traceability investigations and take the appropriate measures.

SANTE G5 informed that in their opinion the production of a ROA is a correct response to a multi-country outbreak. Indeed, the ROA is an important instrument for stimulating the Member States to investigate on a specific event. Moreover, as soon as the source is identified, SANTE implements the necessary control measures, when relevant; then EC periodically evaluates the situation to figure out if actions are needed (e.g., intensification or reduction of controls). Particularly on the event discussed, SANTE periodically consider the revision of the Commission Implementing Regulation (EU) 2019/1793 on the temporary increase of official controls and emergency measures governing the entry into the Union of certain goods from certain third countries, including *Salmonella* in sesame seeds from Syria and other countries.

Concerning the discussion related to this session 1, the audience has been asked to respond to the following questions through Slido (see appendix II):

*Q1.1 Should sequences of additional Salmonella serotypes from suspected food be shared with public health for active case finding? [90 respondents]*

There was a consensus (100%) from the audience about sharing with public health sector the sequences of additional *Salmonella* serotypes detected from suspected food. However, the modality on how this should happen needs to be decided. EFSA underlined that food data should always be submitted to the EFSA One Health WGS system, but this doesn't prevent the Member States to share data on bilateral basis among them. It has been

proposed to use *i*RASFF as a possible platform for sharing reference assemblies of food data.

*Q1.2 PUBLIC HEALTH SECTOR: Does the public health sector in your country apply a strategy on how to prioritize the sequencing of isolates? [68 respondents]*

*Q1.3 FOOD SAFETY SECTOR: Does the food safety sector in your country apply a strategy on how to prioritize the sequencing of isolates? [68 respondents]*

The replies from the public health sector and food safety sector were similar, with 44-41% of participants responding "Yes", respectively, and 31-28% replying "No" (25-31% responded "I don't know"). The approach on how to prioritize the sequencing of isolates varies between countries and by pathogen and sector. It was underlined that a relevant point would be to increase awareness among participants on the differences among countries.

*Q1.4 Using key words, which are according to you the major challenges in WGS data sharing as response to foodborne events? [81 respondents]*

The main issues identified were Confidentiality, Capacity, Trust, Resources, Time, and Sharing data.

## **4.2 SESSION 2| How to address prolonged listeriosis clusters linked to RTE fish products at EU/EEA level? (Session closed to only network members)**

**Chairs: Saara Kotila (ECDC) and Valentina Rizzi (EFSA)**

The second session focused on how to address prolonged listeriosis clusters linked to ready-to-eat (RTE) fish products at EU/EEA level.

Hendrik Wilking (RKI) presented the invasive listeriosis outbreaks linked to smoked and gravad salmon products. He explained the investigations carried out in Germany supported the evidence regarding salmon products as plausible source of infection of human cases. He underlined the difficulty to retrieve information from the patients interviews, because the patients are very ill or when the interview happens it is a much later and they don't remember what they ate. Based on genomic evidence and descriptive evidence from patient interviews he concluded that smoked and gravad salmon products contaminated with *L. monocytogenes* pose a serious risk for listeriosis infection in Germany. In addition, he recommended that salmon producers need to improve hygiene measures and reduce the entry of pathogens into food processing. Finally, he recommended that stakeholders recommending fish consume to vulnerable populations should be better informed of listeriosis risks.

Thomas Schewe (BVL) gave the food safety perspective for the listeriosis clusters linked to RTE salmon in Germany. He explained the pattern of consumption of salmon in Germany and its origin and trade pattern. He clarified that when the presence of *L. monocytogenes* is detected in the food chain, limited actions can be implemented by competent authorities based on the current legislation. He underlined the needs to raise awareness of the operators about the risk and their responsibility. He also recommended to raise awareness of the consumers and care facilities of the risk associated with this product, especially for vulnerable populations. Finally, he advised to strengthen microbiological criteria for RTE foods that allow growth of *Listeria*.

Ife Slegers (NVWA) reported the experience of the Competent Authority on the investigation of listeriosis clusters in the Netherlands. She communicated that there is a good coordination among the public health and food safety institutes that facilitate the data sharing across sectors. This also enables coordinated follow-up actions on WGS signals of joined clusters leading to intensified inspection of suspected food sources and production facilities. Linda Verhoef (NVWA) explained that all those data on listeriosis clusters are combined with literature studies and used for multiannual risk assessment along the food production chain.

Taran Skjerdal (NVI) presented the *Listeria* monitoring in farmed fish production in Norway. She acknowledged that fresh salmon from Norway can be linked to illness cases abroad, considering

the role of Norway as large exporter of salmon (in particular of fresh fish) and knowing that fresh salmon is occasionally contaminated with *L. monocytogenes*. She explained how the monitoring of fish (at fish farming and slaughterhouse) for *Listeria* contamination is done in Norway; this includes official programmes and research projects, whose sequences are made publicly available and whose databases can be biased towards companies that participate in such research projects. She also underlined some challenges related to fair sharing of data, still respecting confidentiality of data from the industry while protecting human health. The main challenge is that there are different views of whether two sequences are the same ones or not. All these points indicate possibility of false conclusions. However, careful interpretation of sampling plans, methods applied for comparison and how strains with different sequences spreads, is likely to reduce the probability of misinterpretations.

Johanna Takkinen (ECDC) briefly explained the objectives of the listeriosis surveillance and the main outcome of the ELITE project. Then she presented the feedback from the ECDC's Food- and Waterborne Diseases and zoonoses Network (FWD-Net) meeting on the criteria for prioritising listeriosis clusters. The first three criteria relate to the "Number of human cases in the cluster" (70%), "Cases occurring within the last 12 months" (65%) and "Microbiological matches in food/environmental samples" (54%). Other criteria include: "Number of countries affected" (39%), "Information available from case interviews" (39%), "Persistence" (23%), "Severity: number of deaths/pregnancy-associated cases" (22%), "Media interest" (7%).

Concerning the discussion related to this session 2, the audience has been asked to respond to the following questions through Slido (see appendix II):

*Q2.1 What are the main obstacles in your country for proactively sharing WGS data at EU level (not linked to a specific foodborne event-during peace time)? [82 respondents]*

Most countries replied that the main obstacles are "Lack of resources" (45%) and "Uncertainty on how the data is handled and used" (27%), "GDPR rules" (5%), "Lack of time" (4%), "Want to retain a right to make a publication" (2%), "Other reasons" (17%).

*Q2.2 Would you like to have predefined rules for being notified about weekly detected joint listeriosis clusters? [72 respondents]*

Most countries (75%) were in favor of having predefined rules for being notified about weekly detected joint listeriosis clusters. Few people replied "No" (3%) and 22% people replied "I do not know".

*Q2.3 Using key words, what is the most important challenge at national level in responding to joint clusters or events at EU level? [63 respondents]*

The most important challenge were "Resources" and "Time" (similar replies: Human resources, Money, Workload and IT, Collaboration).

Regarding obstacles in data sharing, the Austrian member commented that it is easier to get the approval to share metadata of food produced abroad compared metadata of food domestically produced.

### **4.3 SESSION 3| One Health whole genome sequencing set up and tools to address cross-border foodborne outbreaks in the EU/EEA (Session closed to only network members)**

**Chairs: Therese Westrell (ECDC) and Valentina Rizzi (EFSA)**

Ingrid Friesema (RIVM) presented the shared WGS database for food safety and human cases in the Netherlands. She briefly explained which actors are involved from the public health and food safety sectors and their role, as well as the objectives of the system. She described how data sharing for *L. monocytogenes* and STEC isolates has been done in the period 2017-2022 (e.g., How, When, What) and presented some statistics on number of isolates shared, clusters identified and classification of clusters by pathogen and type (human versus mixed clusters).

Susanne Schjørring (SSI) presented the SOFI-project: a real time cross-sectoral sharing and analysis of WGS sequences. She presented the Central Management Outbreak Group (CMOG), its composition, tasks and operational activities. It was underlined that this group is not a decision-making authority but can recommend activities to the participating institutions. Susanne Schjørring also explained the national sequence-based Surveillance Of Foodborne Infections (SOFI), a system for real-time sequence-based surveillance, outbreak detection and comparisons, by giving some details on its ownership, analytical flow, sequence comparison and visualisation functionalities.

Mirko Rossi (EFSA) and Erik Alm (ECDC) presented the One Health WGS system and how to share genomic profiles at EU/EEA level.

Mirko Rossi presented the overall structure of the One Health WGS system and its main objectives. He showed some statistics regarding the current status of data submission to the EFSA system and the interaction with the ECDC system. He highlighted that, although most of the data submissions were triggered by the calls for data launched in conjunction with the production of a Rapid Outbreak Assessment (ROA) or a Joint Notification Summary (JNS) report, few countries started to submit data proactively. Finally, Mirko Rossi showed the main discussion points raised during the first meeting with the WGS subgroup of the Zoonoses Scientific Network (which is composed by all Country Officers and by representative of the Data Providers)<sup>3</sup>.

Erik Alm presented the current implementation of the system at ECDC side and the plans for the future. In 2019, ECDC moved to WGS/core genome Multilocus sequence typing (cgMLST) cluster detection for *Listeria* human isolates. Since July 2022, the ECDC-EFSA One Health WGS system is operational and currently weekly cluster analyses between the EFSA's and the ECDC's systems are performed routinely for *Listeria* and ad-hoc cluster analyses for *Salmonella*. This will be expanded to include additional pathogens in the near future. For *Listeria*, Erik presented some statistics on the clusters identified by geographical dimension and current status.

Regarding the data visibility restrictions, Erik Alm informed that national identifiers for human data can only be seen by ECDC and the submitting country. For EFSA data, country of origin can currently only be seen by ECDC and the reporting country and further restrictions on data visibility can be applied by the EFSA users. Clusters and Signals can only be seen by involved countries with human cases in the cluster, unless upgraded to an Event or Threat. ECDC informed that the use of BioNumerics will be extended beyond 2024 as a Data Management system by replacing only analytical components.

Johanna Takkinen (ECDC) presented feedback from the public health network on the access to EpiPulse for Food safety users. The proposal was that, when public health users of an EU/EEA country launch an Event where foodborne transmission is suspected, and the event has become multi-country (two or more countries involved), food safety users from the launching country and from countries with human cases linked to the event would be granted access. It was commented that this approach could exclude the countries without human cases but involved in the traceability of a suspected food vehicle. Hence, it was proposed to grant access to food safety users from all countries. This view was supported by the public health network. Regarding the EpiPulse role for the food safety users, the public health network suggested to start with the EpiPulse Reader access, which enables access to the event summary, and reassess the access needs after some time. One limitation of this approach would however be that it would not give direct access to representative human sequence FASTA file.

The main message of the discussion was the importance of data sharing from the countries, because ECDC and EFSA can take care of the technical aspects but the contribution from the countries is pivotal.

Concerning the discussion related to this session 3, the audience has been asked to respond to the following questions through Slido (see appendix II):

*Q3.1 Does the food sector in your country apply a strategy on when to share the sequenced isolates with the public health sector? [63 respondents]*

---

<sup>3</sup> <https://www.efsa.europa.eu/sites/default/files/zoonosesdatacollectiontaskforcelist.pdf>

Most members (41%) replies "No, I don't know", while 25% responded "Yes – when clusters of human cases are identified", 19% replied "Yes - foodborne outbreaks", 14% replied "Yes – national surveillance programs".

*Q3.2 Does the public health sector in your country apply a strategy on when to share the sequenced isolates with the food safety sector? [62 respondents]*

Most members (40%) replies "No", while 19% replied "Yes - foodborne outbreaks", 16% responded "Yes – when clusters of human cases are identified", 15% replied "I don't know" and 10% replied "Yes – national surveillance programs".

*Q3.3 Using key words, which functionalities should be improved or implemented in the ECDC and EFSA One Health WGS System for ensuring efficient cross-sector collaboration and data sharing? [48 respondents]*

The functionalities suggested for improvement or implementation were: "Training", "Weekly summary", "Easy to upload", "QC", "Capacity building", "Collaboration".

#### **4.4 SESSION 4| How to improve cross-sectoral response to multi-country foodborne outbreaks? (Interactive session closed to only network members)**

##### **Chairs: EFSA**

The objective of the session was to bring together national experts from both sectors and to stimulate a cross-sectorial discussion about the best approaches to produce and share data in support to the investigation of multi-country foodborne outbreaks. In particular, the aim was to capture from the audience critical feedback and ideas associated with data production, sharing and access; to identify challenges and potential solutions; and to define critical building blocks necessary to construct a cross-sectoral protocol for the swift and efficient response during multi-country foodborne outbreaks across Europe.

The lead moderator (EFSA contractor) chaired the session and guided the experts through a series of questions (through Wooclap) over three key areas related to the stages of a multi-country foodborne outbreak (i.e. Whole genome sequencing and metadata sharing, Cluster detection, Outbreak assessment).

For the first stage, the following questions were posed to the audience per sector.

*Q4.1a [Food sector] The most important criterion for prioritizing the selection of isolates to be sequenced and shared at EU/EEA level (irrespective if Listeria or Salmonella) is....?*

The top answer was "suspected FBO" followed by "multinational outbreak," "link to RASFF notifications" and "Outbreak-related situation". Therefore, the answers appeared to be divided into two main categories: reaction to a foodborne outbreak (such as human outbreak and multicounty outbreak) and proactive food data collection (specifically linked to RASFF notifications). The public health sector representatives were surprised that "outbreaks" were frequently mentioned in the answers by food sector, while the expectation was that the food data are shared routinely to facilitate the identification of potential signals/ outbreaks. The public health sector representatives also acknowledged the relevance of the criteria linked to food (i.e. "consumer exposure", "food consumption pattern" and "RASFF"), but mentioned their expectation of seeing EFSA's control programs as a priority criterion. It was underlined that border control inspection was not proposed as a criterion; indeed it would be very relevant for food items circulating broadly or entering the EU. The audience also underlined that the context of the alert (i.e. from official or own-check samples) will impact on the probability of isolates to be sequenced and shared at EU level, official samples being more likely given the first priority.

*Q4.1b [Public health sector] The most important criterion for prioritizing the selection of isolates to be sequenced and shared at EU/EEA level (irrespective if Listeria or Salmonella) is....?*



The top answers were "severity of disease" (and answers related to "impact on health") and "outbreak strain," followed by "cross border spread potential". The audience underlined the relevance of the prioritization of the isolates to be sequenced that can vary based on the experience and strategy of different countries and can change for different pathogens. For example, sequencing every isolate of *Listeria* was deemed essential due to the severity of related clinical cases. Therefore, for *Listeria* the other typing methods could be deprioritized in favor of sequencing.

The top criteria identified from Q4.1a and Q4.1b were ranked by all participants as follows:

Food safety sector: "Suspected FBO" (53%), "RASFF" (53%), "Multi-country FBO" (50%), "Wider distribution & border control" (35%).

Public health sector: "Severity of diseases" (55%), "Outbreak related cases" (55%), "All isolates of priority pathogens (e.g. *Listeria*, STEC)" (49%), "Cross-border potential" (33%), "Number of isolates" (18%).

For the second stage, the following questions were posed to the audience.

*Q4.2 The most important criterion that ECDC and EFSA should use to prioritize among identified joint clusters of events (irrespective of Listeria or Salmonella) is ....?]*

EFSA underlined that the challenge of prioritizing joint clusters needs to be addressed considering the ever-increasing number of such clusters that are beyond those recognized within their own countries. The most popular answers were "Number of cases" and "Severity". It was commented that criteria (e.g. severity of the disease) can vary based on the pathogen and considering workforce and resource constraints when making these criteria operational. Other factors could be considered, for example time elapsed between collection of food sample and the human case (and the consequent likelihood of a food item being the outbreak source based on epidemiological evidence). However, historical data are relevant background information for surveillance purposes.

*Q4.3 When ECDC's weekly cluster analysis of human cases aligns with food isolates, the most important joint action by EFSA and ECDC needed to support affected countries is...?*

"Communication" emerged as a key theme, with terms such as "inform" and "share" prominently featured. The participants highlighted the importance for Member States to be informed about events without being overwhelmed with excessive information; they emphasized the need to maintain flexibility to accommodate varying information needs. France suggests that a space for national investigations within the One Health WGS system is created.

EFSA also clarified that the system's scope is centered around shared data for cluster analyses; it is not intended as a central repository for raw sequencing data but rather as a platform for identifying signals.

For the third stage, the following question was asked to the audience.

*Q4.4 The best way to ensure the rapid sharing of human reference genome across sectors during an outbreak is...?*

The most frequent answer was "EpiPulse," followed by "Public via ENA/NCBI", "One Health WGS". EpiPulse is a platform that drew attention despite prior discussions indicating limited access for the food safety sector. Indeed, the public health sector was more inclined to grant "reader" access to food safety sector. However, such access might restrict the food sector from accessing the fasta files. To address this, a proposed solution involved public health authorities uploading sequences to a public repository and sharing core information through EpiPulse. EFSA confirmed that the EFSA system was not designed for sharing sequences across sector outside the querying functionality.

The outcome of these discussions will be considered when drafting the protocol for cross sectorial collaboration to respond to multi-country foodborne threats.

## 5. Conclusions

The joint meeting of public health and food safety experts provided valuable opportunity to exchange views and discuss about further development of collaboration across sectors at the EU/EEA level. The ECDC and EFSA joint One Health WGS system has been operational for over a year and the collection of data across sectors has become a regular support for ECDC and EFSA joint Rapid Outbreak Assessments and other types of risk assessments. ECDC and EFSA encouraged countries to set up a strategy for which isolates to sequence and share at EU level. Concerning the food sector, proactive sequencing of food isolates associated with a RASFF notification could be a good start as the notifications might concern food involved in events affecting multiple countries.

During the wrap-up discussion it was emphasized that building trust across sectors, identifying shared criteria for response, and fostering mutual cooperation across sectors are crucial for effective information sharing and joint response. The need to connect various stakeholders and networks, and involve a broader audience (e.g. risk managers, policy makers), were key takeaways for the development and implementation of a protocol for cross-sectoral collaboration in the context of foodborne outbreak investigation at EU/EEA level. The protocol should be validated by both networks with the aim to have it implemented starting from 2025.

## 6. Closure of the meeting

The Chairs thanked the Networks' Representatives for an intensive and productive meeting and closed the meeting at 18:00.

The next interagency network meeting will be in December 2024 only online and it will focus on the discussion and final approval of the cross-sectorial protocol.

MEETING MINUTES – 19 September 2023  
4<sup>th</sup> ECDC's FWD Network and EFSA's Zoonoses Network Joint Meeting

**APPENDIX I: Meeting programme**

08:15-09:00	<b>Registration</b>	
09:00-09:20	<b>Welcome from ECDC, EFSA - Johanna Takkinen (ECDC) and Valentina Rizzi (EFSA)</b> 1- Welcome from ECHA; what is ECHA? What does? [10 min] 2- Housekeeping [5 min] 3- Presentation of the networks [5 min]	
<b>SESSION 1   One Health collaboration in practice (open session)</b> Chairs: Cecilia Jernberg (ECDC) and Mirko Rossi (EFSA)		
09:20-10:10	<b>Multi-country <i>Salmonella</i> outbreak linked to sesame seed products</b>	
	National perspective	<b>Nadja Karamehmedovic, Rikard Dryselius and Mats Lindblad</b> Sweden
	EU perspective	<b>Johanna Takkinen</b> , ECDC Sweden
	Global perspective	<b>Heather Carleton</b> US-CDC
10:10-10:30	<b>Panel Q&amp;A 1</b>	<b>All</b>
10:30-11:00	<b>Coffee/Tea break [outside meeting room VOIMA]</b>	
<b>SESSION 2   How to address prolonged listeriosis clusters linked to RTE fish products at EU/EEA level? (Session closed to only network members)</b> Chairs: Saara Kotila (ECDC) and Valentina Rizzi (EFSA)		
11:00-11:30	<b>Listeriosis clusters linked to RTE salmon products in Germany</b>	<b>Hendrik Wilking</b> , RKI, Germany <b>Thomas Schwebe</b> , BVL, Germany
11:30-11:45	<b>Listeriosis clusters investigation in the Netherlands</b>	<b>Ife Slegers - Fitz-James</b> NVWA, The Netherlands
11:45-12:00	<b><i>Listeria</i> monitoring in farmed fish production in Norway</b>	<b>Taran Skjerdal</b> , Norwegian Veterinary Institute, Norway (remote contribution)
12:00-12:10	<b>EU criteria for weekly listeriosis cluster analysis</b>	<b>Johanna Takkinen</b> , ECDC
12:10-12:30	<b>Panel Q&amp;A 2</b>	<b>All</b>
12:30-14:00	<b>Lunch break</b>	

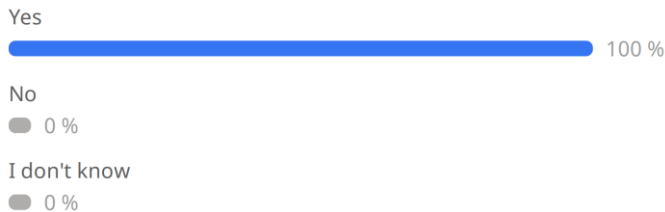
MEETING MINUTES – 19 September 2023  
 4<sup>th</sup> ECDC's FWD Network and EFSA's Zoonoses Network Joint Meeting

<b>SESSION 3   One Health whole genome sequencing set up and tools to address cross-border foodborne outbreaks in the EU/EEA (Session closed to only network members)</b>		
<b>Chairs: Therese Westrell (ECDC) and Valentina Rizzi (EFSA)</b>		
14:00-14:15	<b>Shared WGS database for food safety and human cases in the Netherlands</b>	<b>Ingrid Friesema</b> , RIVM, The Netherlands
14:15-14:30	<b>SOFI-project: a real time cross-sectoral sharing and analysis of WGS sequences</b>	<b>Susanne Schjørring</b> , SSI, Denmark
14:30-15:00	<b>Sharing genomic profile using One Health WGS system at EU/EEA level</b>	<b>Mirko Rossi</b> (EFSA) and <b>Eric Alm</b> (ECDC)
15:00-15:10	<b>Feedback on access to EpiPulse for Food safety users</b>	<b>Johanna Takkinen</b>
15:10-15:30	<b>Panel Q&amp;A 3</b>	<b>All</b>
15:30-16:00	<b>Coffee/Tea break [outside meeting room SAMPO]</b>	
<b>SESSION 4   How to improve cross-sectoral response to multi-country foodborne outbreaks? (Session closed to only network members)</b>		
<b>Chairs: EFSA</b>		
16:00-17:50	<b>Moderated interactive activity</b>	
17:50-18:00	<b>Closure of the meeting – Johanna Takkinen (ECDC) and Valentina Rizzi (EFSA)</b>	

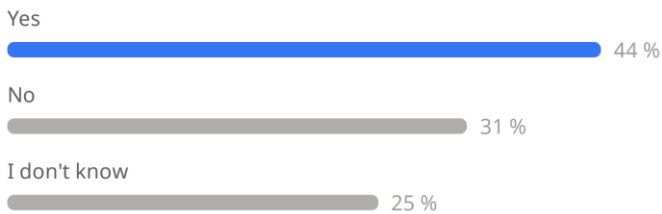
**APPENDIX II: Outcome of the SLIDO questions**

**Q&A Session 1**

**1.1 Should sequences of additional Salmonella serotypes from suspected food be shared with public health for active case finding?** 090



**1.2 PUBLIC HEALTH SECTOR: Does the public health sector in your country apply a strategy on how to prioritize the sequencing of isolates?** 068



**1.3 FOOD SAFETY SECTOR: Does the food safety sector in your country apply a strategy on how to prioritize the sequencing of isolates?** 064



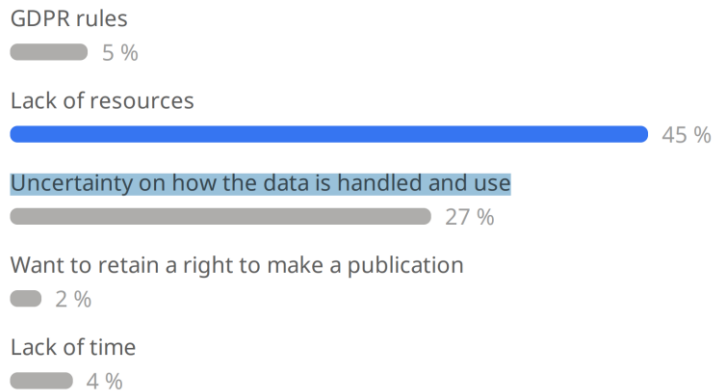
**1.4 Using key words, which are according to you the major challenges in WGS data sharing as response to foodborne events?** 081



## Q&A Session 2

**2.1 What are the main obstacles in your country for proactively sharing WGS data at EU level (not linked to a specific foodborne event-during peace time)?**  
 (1/2)

082



**2.2 Would you like to have predefined rules for being notified about weekly detected joint listeriosis clusters?**

072



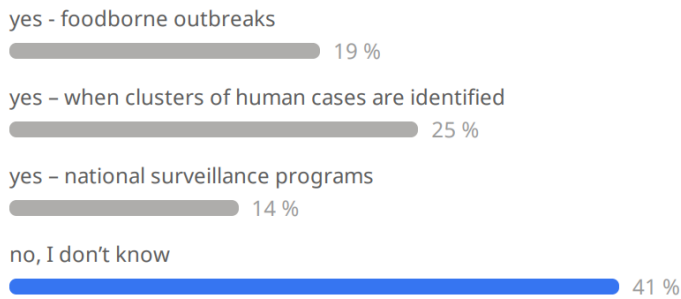
**2.3 Using key words, what is the most important challenge at national level in responding to joint clusters or events at EU level?**

063

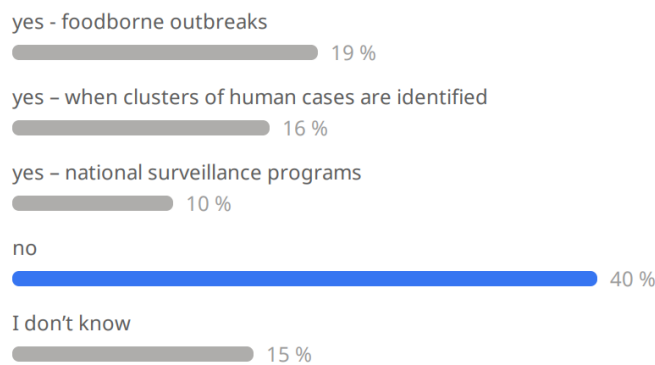


**Q&A Session 3**

**3.1 Does the food sector in your country apply a strategy on when to share the sequenced isolates with the public health sector?** 0 6 3



**3.2 Does the public health sector in your country apply a strategy on when to share the sequenced isolates with the food safety sector?** 0 6 2

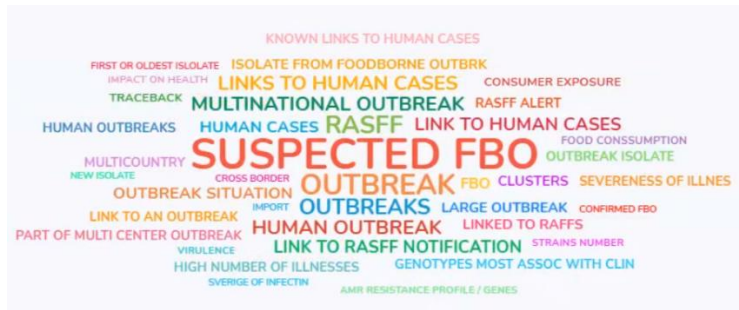


**3.3 Using key words, which functionalities should be improved or implemented in the of ECDC and EFSA One Health WGS System for ensuring efficient cross-sector collaboration and data sharing?** 0 4 8



### Q&A Session 4

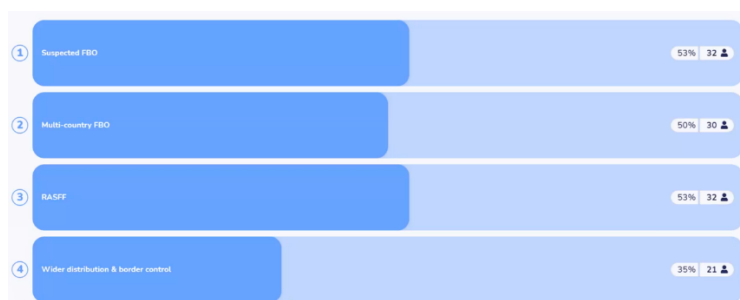
**Q4.1a [Food sector] The most important criterion for prioritizing the selection of isolates to be sequenced and shared at EU/EEA level (irrespective if Listeria or Salmonella) is....?**



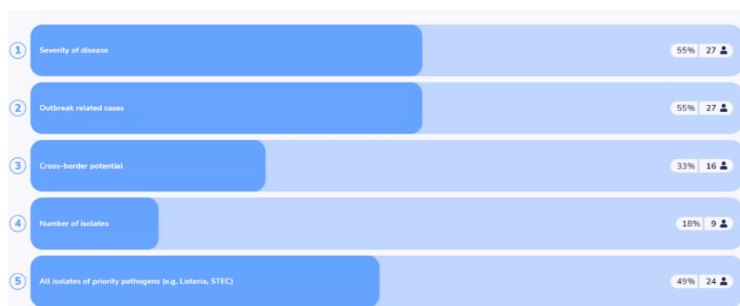
**Q4.1b [Public health sector] The most important criterion for prioritizing the selection of isolates to be sequenced and shared at EU/EEA level (irrespective if Listeria or Salmonella) is....?**



### Ranking of Q4.1a

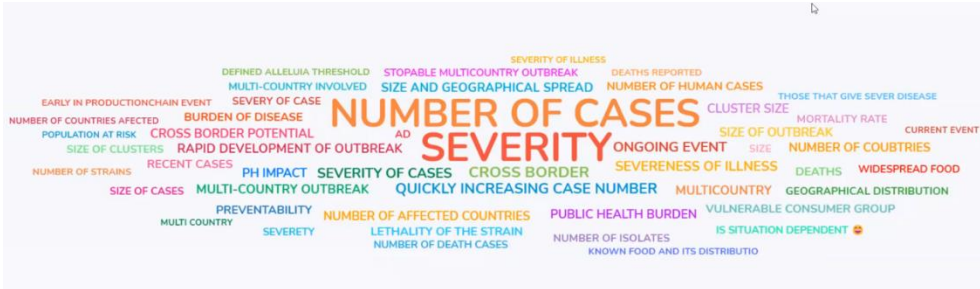


### Ranking of Q4.1b





**Q4.2 The most important criterion that ECDC and EFSA should use to prioritize among identified joint clusters of events (irrespective of Listeria or Salmonella) is ....?**



**Q4.3 When ECDC's weekly cluster analysis of human cases aligns with food isolates, the most important joint action by EFSA and ECDC needed to support affected countries is...?**



**Q4.4 The best way to ensure the rapid sharing of human reference genome across sectors during an outbreak is...?**

