MAPPING DATA INTERPRETATION

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3rd mapping workshop

January 31, 2023

FWD AMR· RefLabCap

THE SUMMARY REPORT/THE SURVEY CONTENT

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- **General part**
  - Diagnostics of *Salmonella* and *Campylobacter*

- **Specific part**
  - Laboratories performing diagnostics of *Salmonella* and *Campylobacter*
  - Human resources, laboratory equipment and funding at local/regional laboratories
  - *Salmonella* and *Campylobacter* detection methods used in diagnostic laboratories
  - *Salmonella* and *Campylobacter* characterisation methods used in local/regional laboratories
  - Salmonella and *Campylobacter* isolate referral and linking to cases *(*
  - Other
  - Conclusions

AIM 1/2

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- To identify strengths and weaknesses in national clinical laboratories' capacities for *Salmonella* and *Campylobacter* detection and characterization
  - To identify gaps/further needs and actions for improvements

1. Diagnostics of *Salmonella* and *Campylobacter*

Please, describe how human diagnostics of *Salmonella* and/or *Campylobacter* is done in your country and include in overall terms the role of different laboratories in detection, culturing and characterisation (e.g., species identification, serotyping, other typing, AMR-testing, WGS).

Write text here (insert more lines as needed)

Please, include your evaluation of strengths/weaknesses and gaps/further needs for the human diagnostics of *Salmonella* and *Campylobacter* in your country.

Write text here (insert more lines as needed)

AIM 2/2

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- **To identify strenghts/weaknesses in national local/regional laboratory capacity for *Salmonella* and *Campylobacter* detection and characterization**
  - Mapping results
  - Strengths are the points with no issues in a particular part of the survey
  - Weaknesses are the issues in a particular part of the survey
- **To identify the gaps for national local/regional laboratory capacity building**
  - Same as weakness, with a negative consequence for diagnostics/national AMR surveillance
- **To identify needs/actions that are necessary for the improvements**
  - Guidance/support from NRL
  - Guidance/support from FWD AMR-RefLabCap to NRLs
    - Training/bespoke consultancy/other support
  - Guidance/support from national PH authorities

DIAGNOSTICS OF *SALMONELLA* AND *CAMPYLOBACTER* 1/1

- 8. Does your laboratory use control material (specimens, DNA etc.) from a reliable source for quality control testing of the following methods? (please select all relevant answers) *Includes both, phenotypic and genotypic testing*
  - Salmonella
    - Detection
    - Species identification
    - Serovar identification
    - Antimicrobial susceptibility testing
    - No, the laboratory does not have access to controls from reliable sources

Key Table/Figure

		Ratio
Detection		60%
Species identification		70%
Serovar identification		70%
Antimicrobial susceptibility testing		20%
No, the laboratory does not have access to controls from reliable sources		20%
No Answer		10%

DIAGNOSTICS OF *SALMONELLA* AND *CAMPYLOBACTER* *1/2*

- **Weakness/Gap**:
  - QC materials are not in use in 20% of clinical labs performing antimicrobial susceptibility testing. This may impact the reliability of testing results for human treatment and/or surveillance of AMR

- **Needs/Actions**
  - NRL will make a list of QC materials to clinical labs
    - FWD AMR – ReflabCap *"Guidance document on internal quality control schemes for reference antimicrobial susceptibility testing for Salmonella and Campylobacter isolates from human samples"* – to be shared and presented to all NRLs in 2023 Q1
  - NRL will contact clinical labs to identify specific needs for QC materials
  - NRL will guide clinical labs on a provision of QC materials in need
    - May require additional resources/support from national PH authorities or FWD AMR-RefLabCap

HUMAN RESOURCES, LABORATORY EQUIPMENT AND FUNDING AT LOCAL/REGIONAL LABORATORIES 2/1

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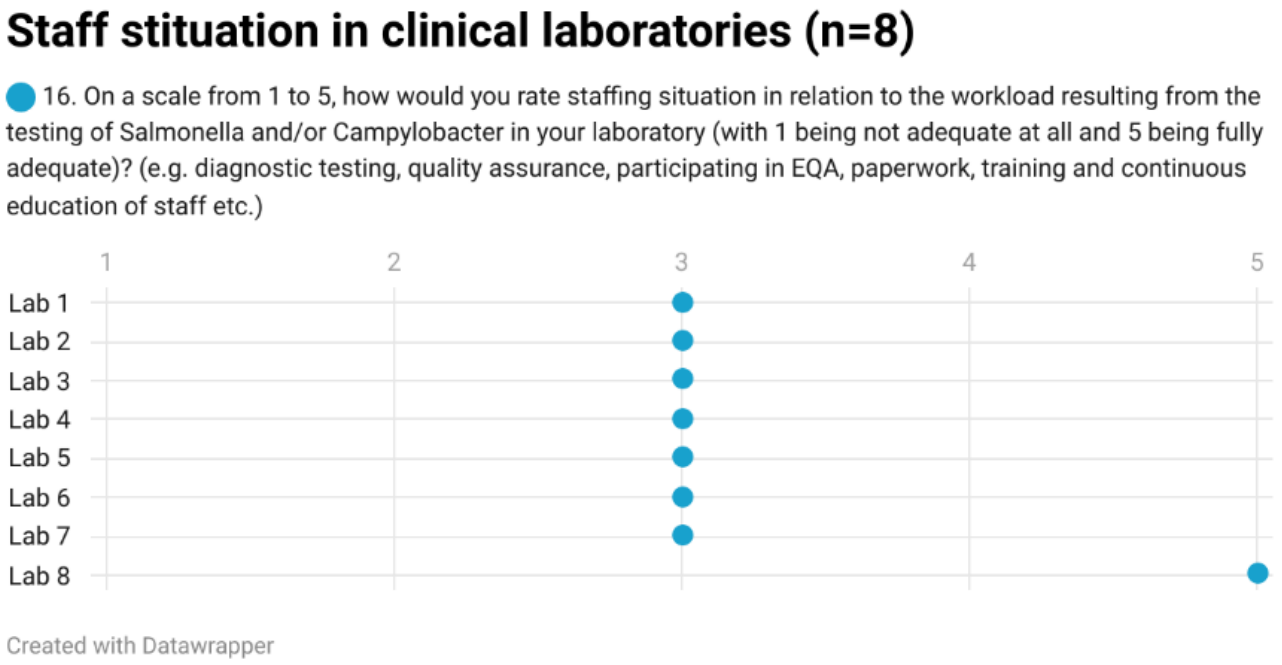
- 14. On a scale from 1 to 5, how would you rate staffing situation in relation to the workload resulting from the testing of *Salmonella* and/or *Campylobacter* in your laboratory (with 1 being not adequate at all and 5 being fully adequate)?
  - (e.g. diagnostic testing, quality assurance, participating in EQA, paperwork, training and continuous education of staff etc.)

Key figure/table



HUMAN RESOURCES, LABORATORY EQUIPMENT AND FUNDING AT LOCAL/REGIONAL LABORATORIES 2/2

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- **Weakness/Gap –** a large proportion of clinical labs reported poor staffing situation in the labs. This may have a negative effect in referring isolates to NRL/AMR testing for national surveillance of AMR.

- **Needs/Actions**
  - May require evaluation of current surveillance system workflow
    - guidance from FWD AMR - RefLabCap
  - Result dissemination to national PH authorities:
    - To demonstrate the need of additional resources to local labs To demonstrate the need of additional resources to NRL

SALMONELLA AND CAMPYLOBACTER DETECTION METHODS USED IN DIAGNOSTIC LABORATORIES 3/1

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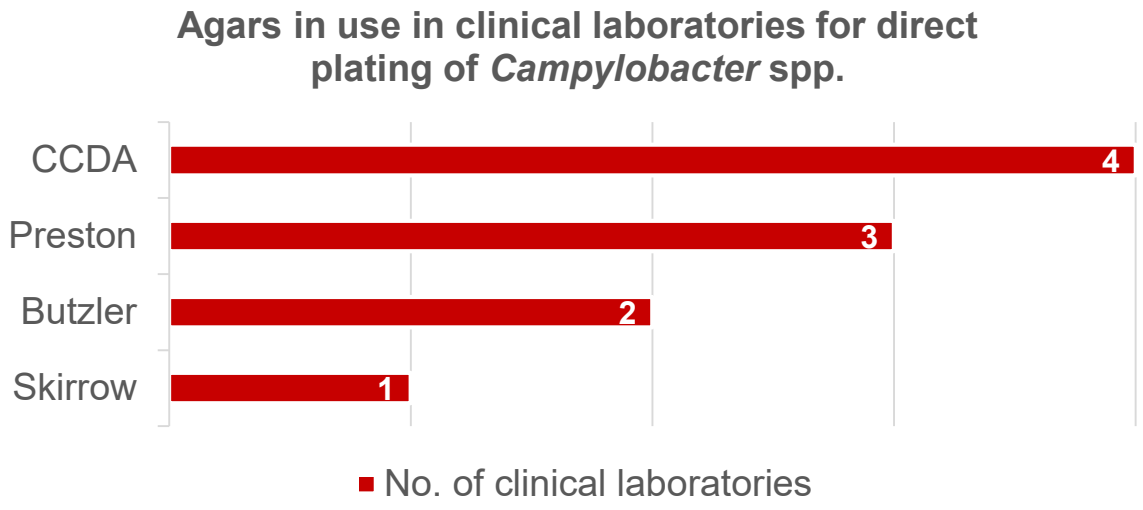
- 20. Which media does your laboratory use for culture-based detection of the following pathogens? (please select all relevant answers)

a) *Campylobacter*

   a. Direct plating, please indicate media in use_____
   b. Selective enrichment and selective plating, please indicate media in use_____

Key Figure/Table



SALMONELLA AND CAMPYLOBACTER DETECTION METHODS USED IN DIAGNOSTIC LABORATORIES 3/2

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- **Weakness/Gap** – Laboratories use various media and some commented to have issues with *Campylobacter* isolation. This have an effect on *Campylobacter* isolation rate and thus loss of isolates

- **Needs/Actions**
  - NRL will develop guidance document for clinical laboratories on *Campylobacter* isolation from different types of clinical samples to enable harmonization of methodology between the laboratories
    - See presentation from FWD AMR – RefLabCap hands-on course (2022)
  - NRL will organize training to clinical laboratories on *Campylobacter* isolation
    - May need an additional support from FWD AMR – RefLabCap:
      - for course materials
      - guidance on how to organize a training course

OTHER POTENTIAL GAPS

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- Laboratories perform Salmonella isolation from selected samples only, or do not perform the isolation and do not send samples for culturing
  - high proportion of isolates are not included in the national surveillance of AMR in Salmonella
- Laboratories use methods that are not recommended in the EU protocol
  - may impact the reliability of testing results for human treatment and/or surveillance of AMR
- Laboratories do not use electronic systems for laboratory information recording
  - negative effect on rapid information/data sharing and integration of clinical laboratory information for the national AMR surveillance purposes

OVERALL CONCLUSIONS

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- Gaps in five different areas of clinical laboratory capacity
  - Which ones should be prioritized?
  - Any common needs/actions to address them?

- Make a preliminary support plan for capacity building in clinical laboratories in 2023-2024
  - Common needs/actions for all clinical laboratories
  - Specific needs/actions for clinical laboratories with specific needs

PARTICIPANT ROUND

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- Representatives from each country (2 min each)
  - Aim(s) and status of ongoing mapping
  - Any good achievements, experiences, lessons learned to be shared with other countries?
  - Any challenges you are facing and would like to share/need advice?