

PulseNet Track: Session 1

Adapting Workflows for WGS:

Where Are We Now and What's to Come?

Moderators: Julia Wolfe (CAOC) and Catherine Pongratz (AK)

Overview of This Session:

- ▶ Brief discussion from CDC and two pilot labs
- ▶ Small group discussion at each table for 10 mins
- ▶ Large group discussion for 25 mins
- ▶ Wrap-up

Questions to think about...

1. Do you receive primary samples and/or isolates for sequencing, and in about what proportion for each organism?
2. Does your workflow incorporate CIDTs (Pros, Cons, How to improve run)? Reflex culturing for CIDT positive assays?
3. Does your laboratory workflow allow for a 7 working day TAT (Yes (How), No (Why), and improvements)?
4. How do you deal with too few samples to fill a standard MiSeq reagent kit in order to meet TAT?
5. What MiSeq chemistries do you use? V2 or V3 chemistry or both; V2 Micro or Nano reagent kits?
6. Are you considering other Library Prep Kits? Nextera DNA Flex, NEB, KAPA, Others?
7. Do you use, or would you consider using other sequencing equipment? (Pros/Cons)
NextSeq for sequencing large batches or iSeq 100 platform (2x150 chemistry)
8. Do you use robotics for extraction and/or library prep? How does it impact cost? TAT impact?
9. Aside for \$\$, are there other issues preventing your lab from conducting real-time surveillance? What support/ideas would be required to improve it? Personnel? Equipment? Training? Other?
10. How is your laboratory prioritizing sequencing all Salmonella samples? Decision criteria?
Continuing PFGE to determine what to sequence? Number and % PFGE vs WGS
11. How do you handle repeat sequencing requests from the CDC and how does it impact your workflow? Do you start from extracting the isolate or somewhere else in the workflow?
12. How do you handle repeat specimens from a single patient?
Number days between collections, cluster detection considerations, PFGE to determine if it should be sequenced?
13. Did your Laboratory go through any reorganization to support WGS?

Wrap-up

- ▶ Any final questions and/or concerns?
 - ▶ Final thoughts?

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