“What can we conclude”

County of San Luis Obispo
Public Health Laboratory
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What can we conclude?

- Tuesday July 31
- Message from local hospital microbiology supervisor – we have a rapid flu pos; do you want the specimen?
- Panel – would you accept the specimen??
What can we conclude?

- ALSO on July 31 and August 1
- Three Influenza test specimens arrive from the local commercial reference lab?

- Clerical staff asks– is this a public health investigation? Or do we charge a fee?

- BTW…. this never happens
- so Panel, what would you do?
Polling Question 1

My laboratory tests for influenza by:

1. The CDC Influenza RT-PCR
2. a Laboratory-developed PCR
3. a commercial PCR
4. a rapid influenza test (RIDT, EIA)
5. actually, we don’t test for influenza
What can we conclude?

- Type A
- Type A \(_{pdm09}\)
- Type B
- H3
- H1 \(_{pdm09}\)

- POS
- POS
- neg
- neg
- POS
- POS

- Influenza A H1pdm2009
Polling Question 2

The test results indicate:

1. a mistake was made in test set-up
2. the H1pdm 09 target is degraded
3. specimens should be re-extracted and re-tested
4. the specimens should be referred to the state laboratory without delay
5. actually, I don’t have a clue
What can we conclude?

- Type A
- Type A\(_{\text{pdm09}}\)
- Type B
- H3
- H1\(_{\text{pdm09}}\)

- POS
- POS
- neg
- neg
- POS
- POS
- neg
- neg
- POS
- POS
- neg
- neg

- Influenza A H1pdm2009

INCONCLUSIVE
What can we conclude?

- So we have initial test results that are
- INCONCLUSIVE

- so Panel, what would you do?

- Have any questions about the patients?
The three patients

- Pt 341 12 yr old male ILI seen at local hop
- Pt 340 11 yr old male ILI seen at Peds practice
- Pt 423 12 yr old male ILI seen at Peds practice
Thursday August 2

- Three inconclusive specimens are re-extracted and PCR run is repeated—same results
- The specimens are shipped overnight to the Viral and Rickettsial Disease Lab (VRDL)
- BTW California State Dept PH investigators report that a necropsy of a dead pig at a CAHFS lab---- was positive by culture for Influenza A virus
Fourth patient with inconclusive results is detected--

California Viral and Rickettsial Disease Lab confirms SLO PHL lab results

California State Dept PH reports that a necropsy of a dead pig performed by CAHFS lab---- was positive by culture for influenza A was sequenced and determined to be...

H1N2
Monday August 6

- VRDL sends three specimens to the CDC
- CDC Influenza laboratory reports results of sequencing analysis on Wednesday August 8
- H1N2v
What can we conclude?

- CDC confirms 6 cases of H1N2v—all detected by the CDC rt-PCR assay performed at the SLO PHL
- UC Davis CAHFS pig necropsy H1N2v

So what are the BIG Public Health Questions are…….

- Pig to human transmission?
- human to human transmission?
- Is the H1N2 variant lethal?
Conclusions?