

Testing for *Legionella* in Environmental Samples

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CSTE Legionnaires' Disease (LD) Surveillance Workgroup Webinar

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Sample Processing



Interpreting Culture Results



BCYE
Direct

Not detected

PCV
Concentrated 20X
Acid Treatment

0.1 cfu/ml

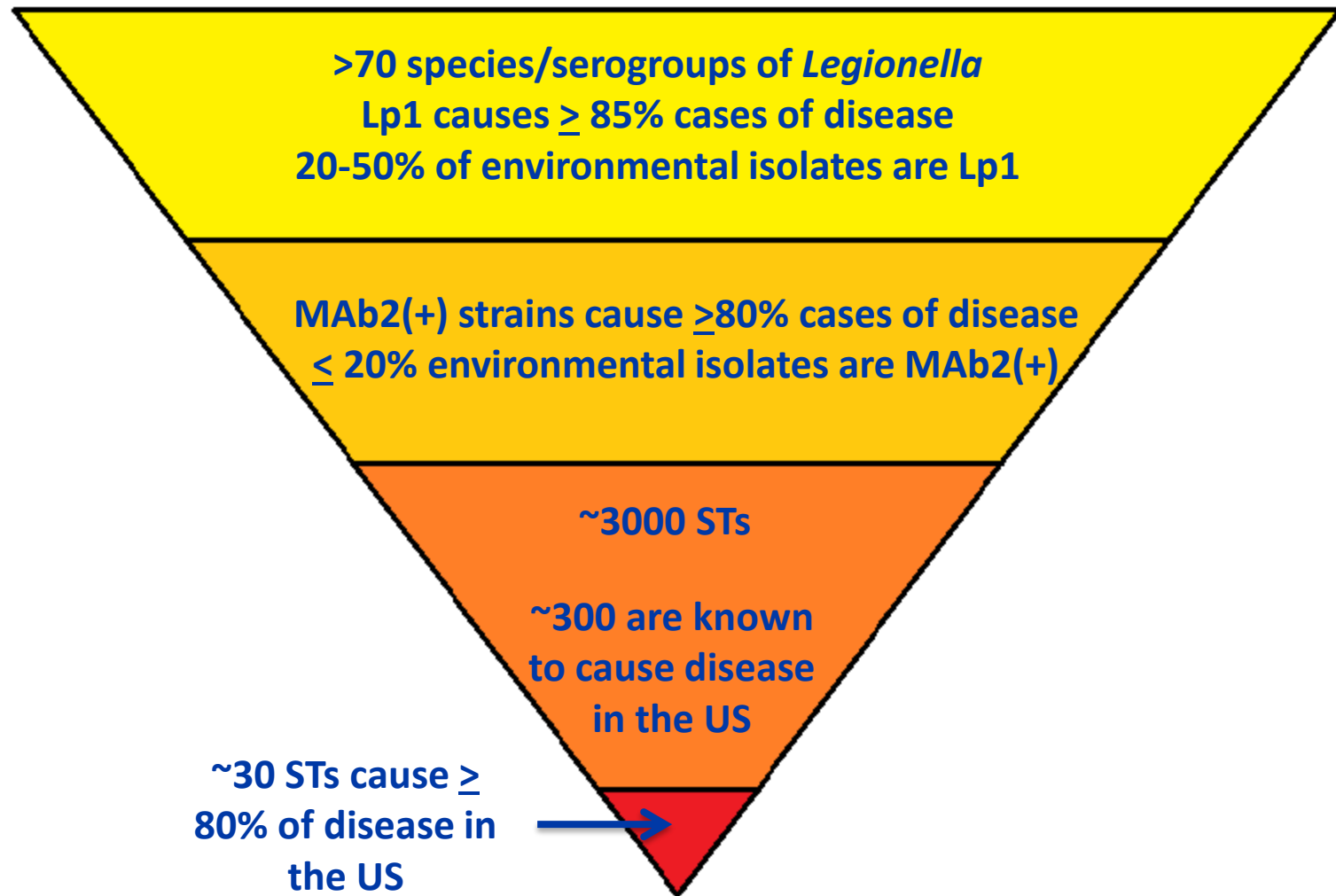
GPCV
Direct
Acid treatment

120 cfu/ml

Accuracy and Precision of Detection

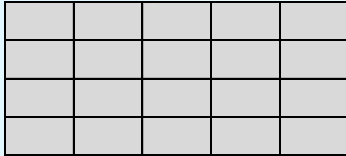
Sample type	Number Tested	Percent Positive	Mean QC (cfu/ml)	Mean Result	Log difference
Pure Negative	789	3%	0	18	0.53
Pure Positive	854	91%	10,191	9,840	-1.54
Pure Variable	903	54%	1,149	3,493	-0.65
Mixed Negative	968	5%	0	32	0.93
Mixed Positive	781	73%	3,516	3,446	-1.80
Mixed Variable	971	51%	257	142	-.076

Pathogenicity of Legionellae

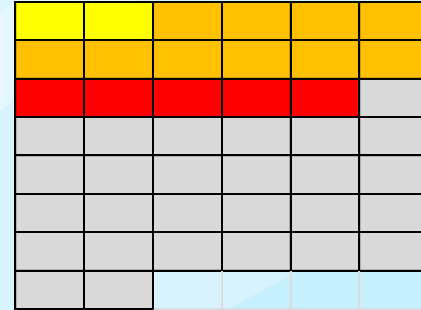


Spot the Outbreak

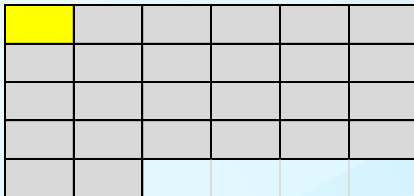
A



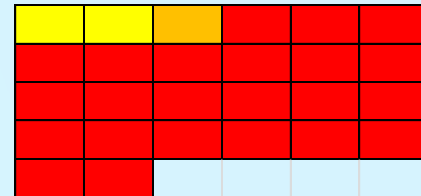
B



C



D



Summary

- ❑ ELITE labs $\geq 95\%$ accuracy
- ❑ Enumeration by traditional culture imprecise
- ❑ Other methods may offer more precision, with limits
- ❑ Thresholds DO NOT predict health effects

