



Legionella

A British Problem?

Dr Tom Laffey

5 November 2025

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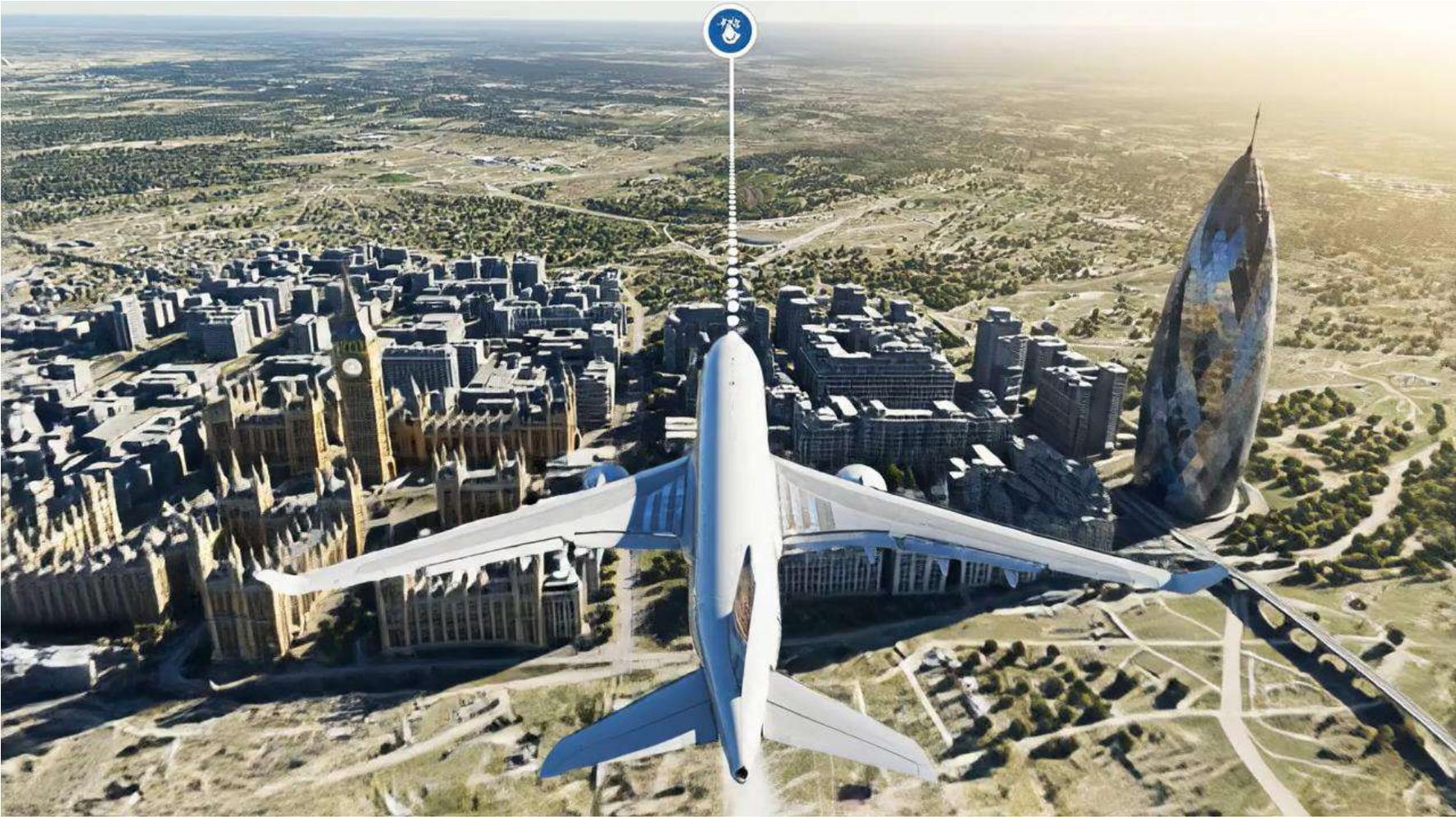
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The Beginning



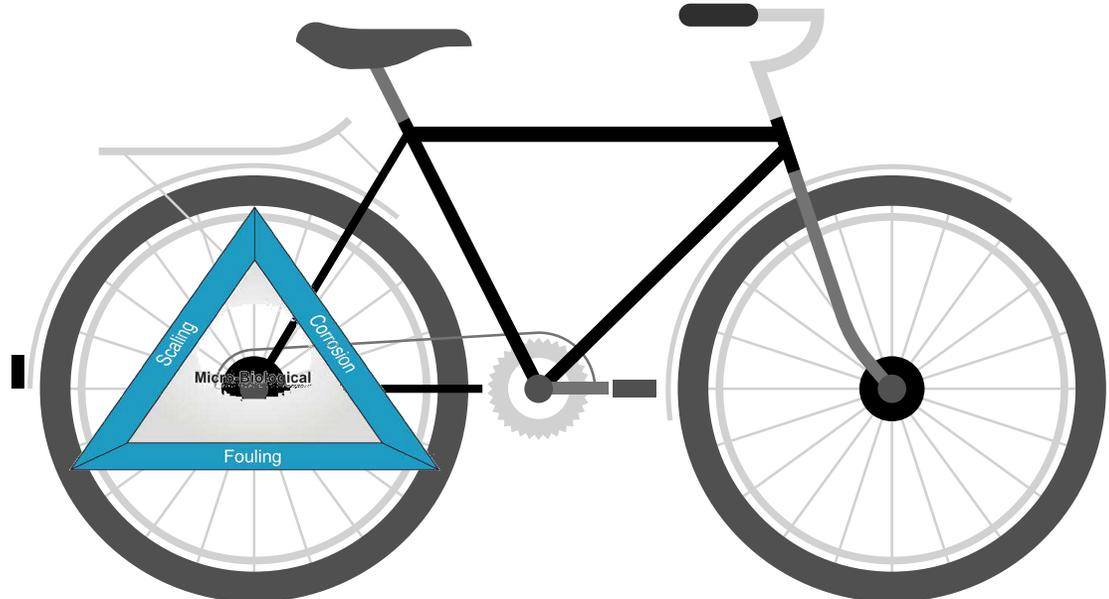
The Great Adventure



In the Spotlight



Assimilation



Technical

Sales

THE LANCET
Microbe

COMMENT · Volume 6, Issue 4, 101031, April 2025 · Open Access

Global surge of Legionnaires' disease in 2024: urgent call for heightened awareness and preparedness

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Legionnaires' disease is becoming more common in Australia. What's behind the increase in cases?

By Sam Nichols Public Health

Tue 20 Aug 2024

Sudden Surge of Legionnaires' Disease Causes Concern Worldwide: Time for India to Step Up Investigation

Amitesh Datta¹, Savita Bhatia², Nageswari Gandham³

Indian Journal of Respiratory Care (2025): 10.5005/jp-journals-11010-1171



European Centre for Disease Prevention and Control

An agency of the European Union

Increasing rates of Legionnaires' disease in the EU/EEA

News

3 Jul 2023

COUNTERPUNCH

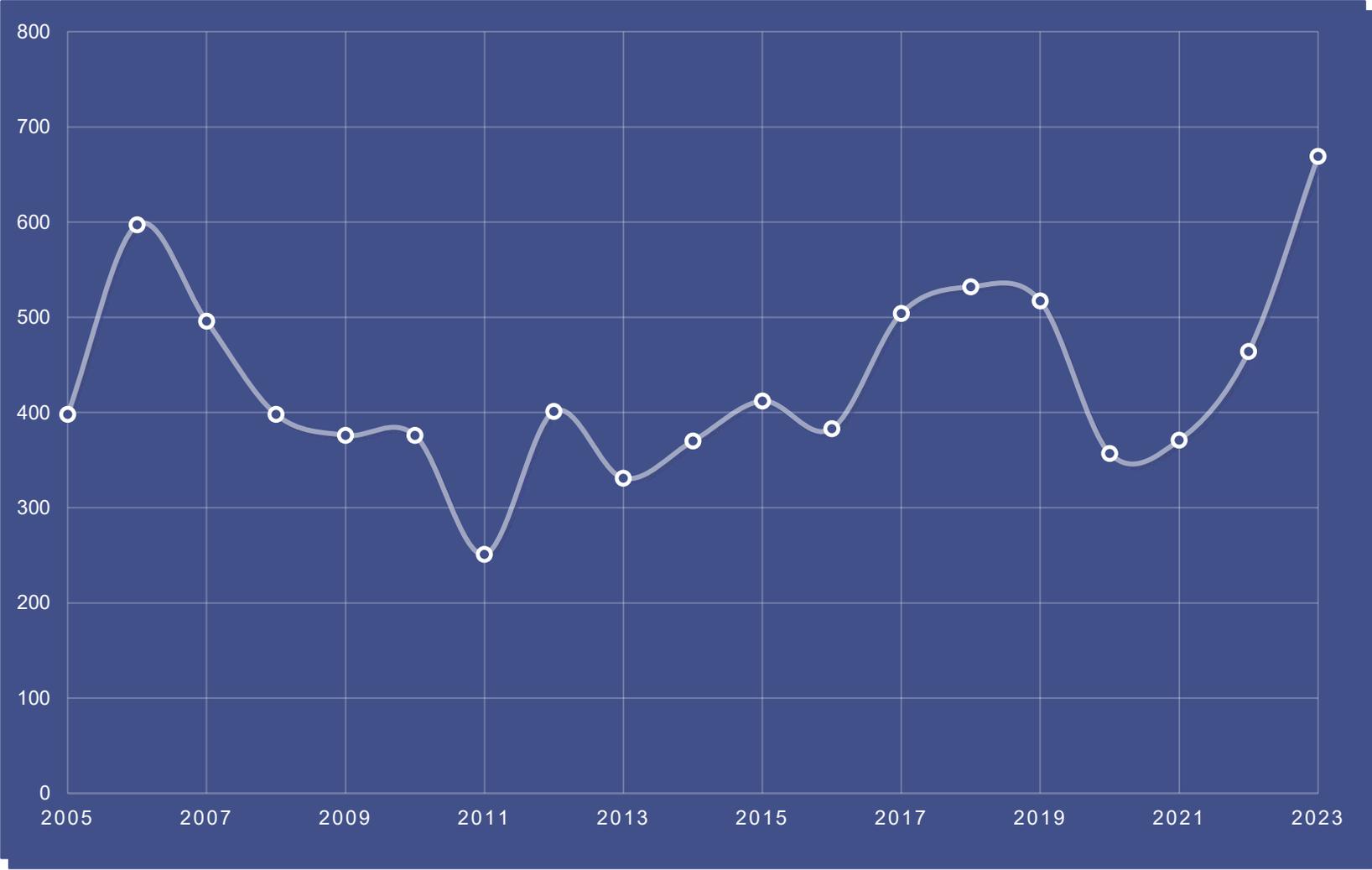
JULY 25, 2025

Big Spike in "Legionnaires' Disease" Has Public Health Experts Worried

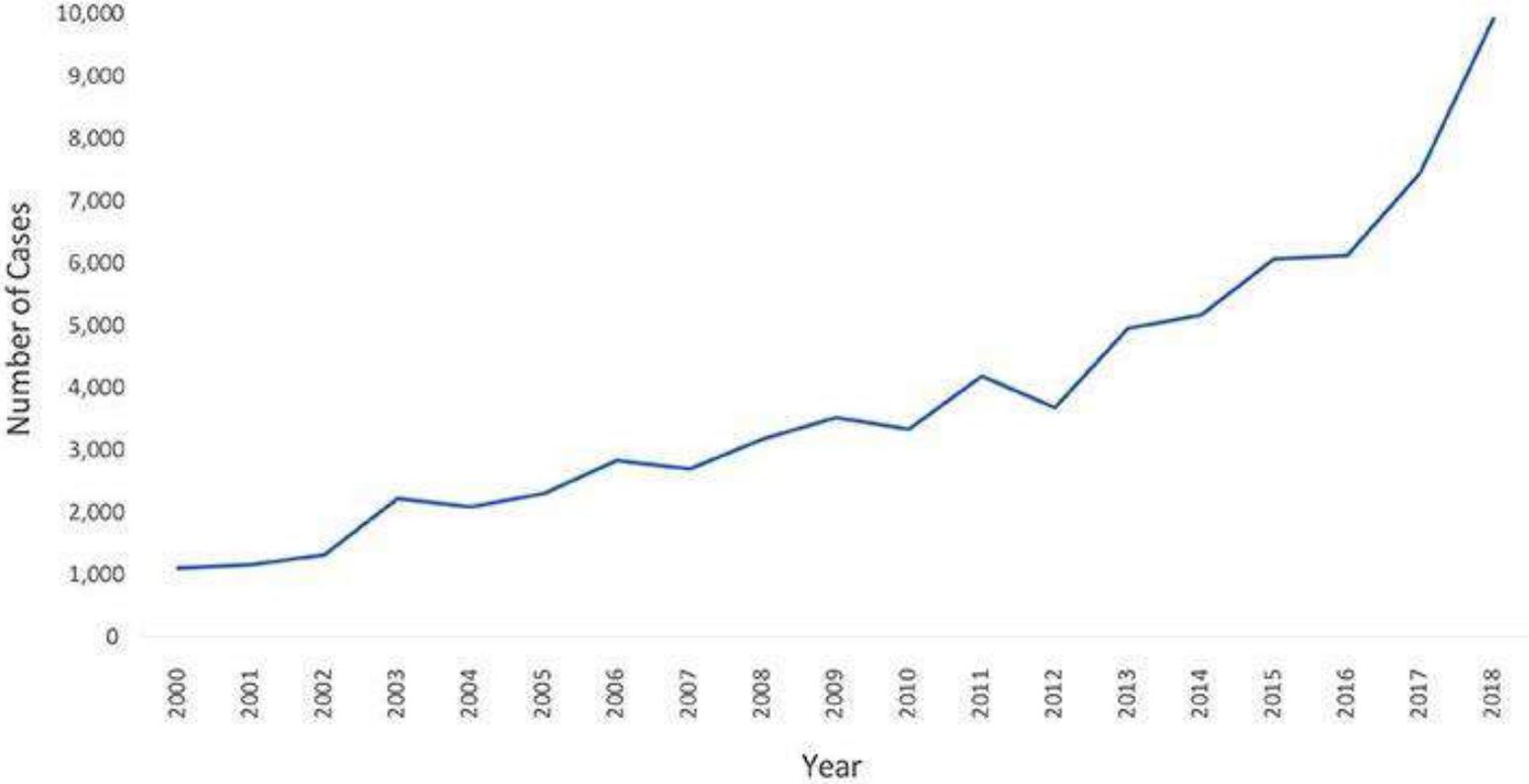
STEWART LAWRENCE



UK Legionellosis cases



USA Legionellosis cases



Source: Nationally Notifiable Diseases Surveillance System

Regulatory Framework

- Regional
- National
- State
- City
- Guidance with Legal status

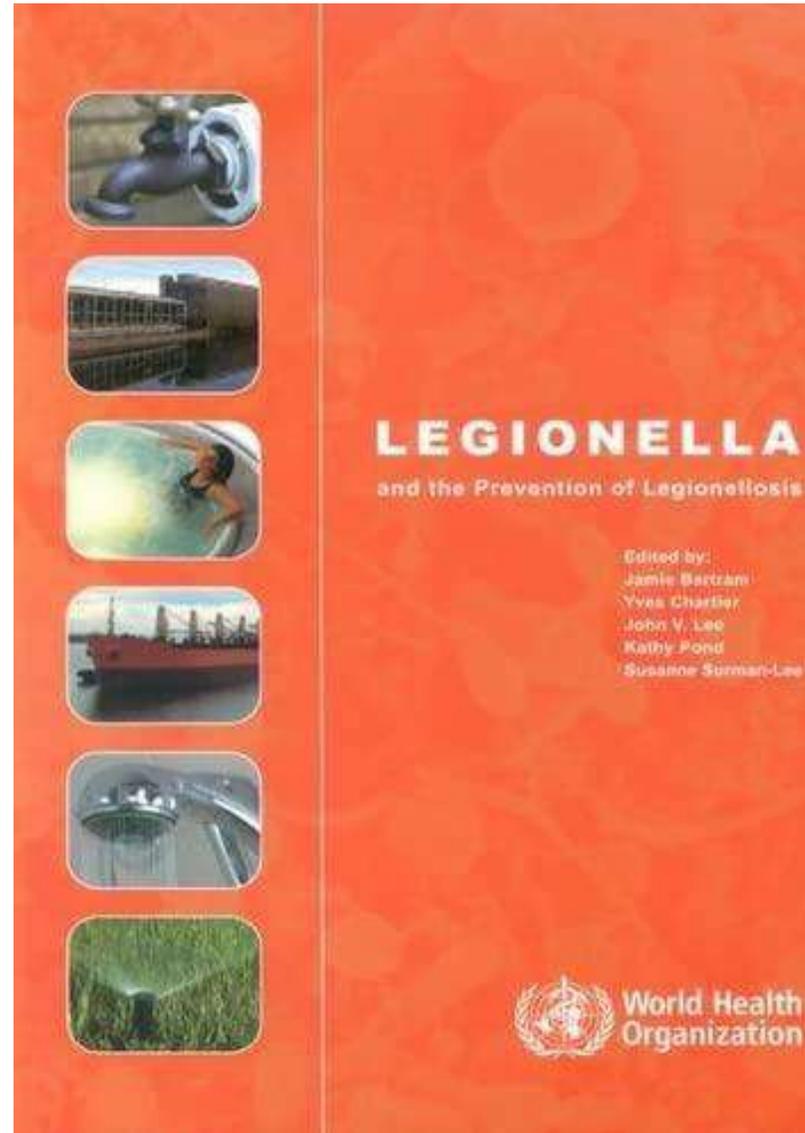


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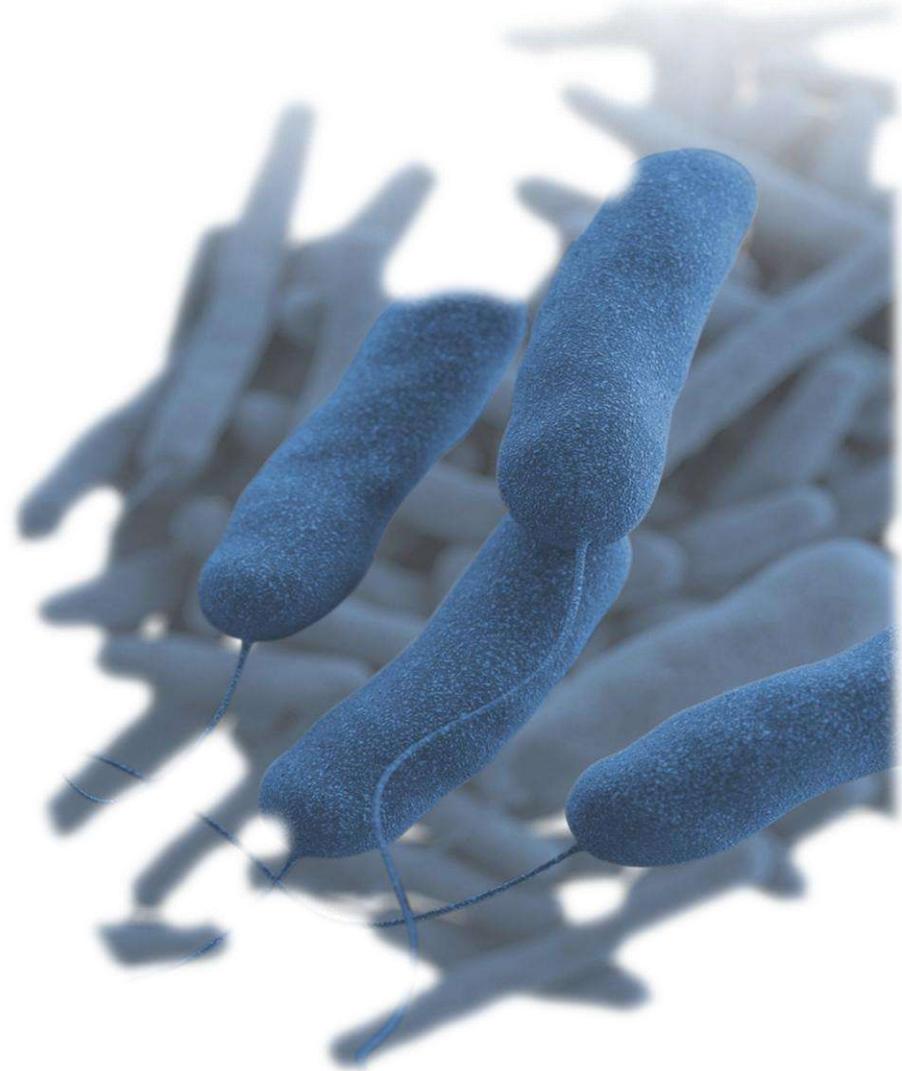
Guidance

- Global
- Regional
- National
- Others
- System specific



Regulations and Guidance

- Recognised hazard
- Common scientific basis
- Common principles
 - Stagnation
 - Nutrients
 - Temperature
 - Exposure
- Differences
 - Risk groups / systems

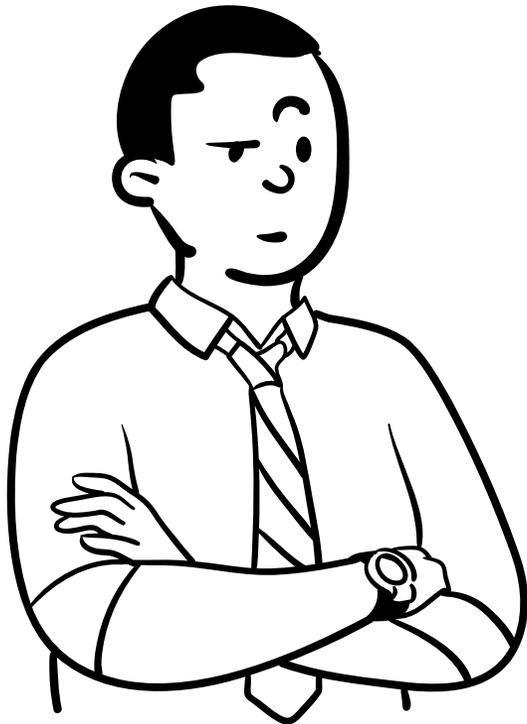


Has the US changed?

- **AWT Annual Convention sessions with Legionella related theme**
 - **San Diego 2016 10%***
 - **Vancouver 2022 30%***
- **ASHRAE Standard and Guideline etc**
- **ASSE 12080**
Professional Qualifications Standard for Legionella Water Safety and Management Personnel
- **A growing “Legionella” industry**
- **Focus on sampling rather than risk management / assessment**

* US department of made-up statistics

Environmental Monitoring



		1	2	3	4	5	6	7	8	9	10	11	12
USA 	A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	B	Green	Green	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green
	C	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	D	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	E	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
UK 	A	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
	B	Red	Yellow	Yellow	Yellow	Red	Red	Red	Red	Yellow	Red	Red	Yellow
	C	Yellow	Red	Red	Yellow	Red	Red	Red	Red	Yellow	Red	Red	Red
	D	Red	Yellow	Yellow	Yellow	Red	Red	Red	Red	Yellow	Yellow	Yellow	Yellow
	E	Red	Red	Red	Yellow	Yellow	Red	Red	Red	Yellow	Red	Red	Red

Raw Data



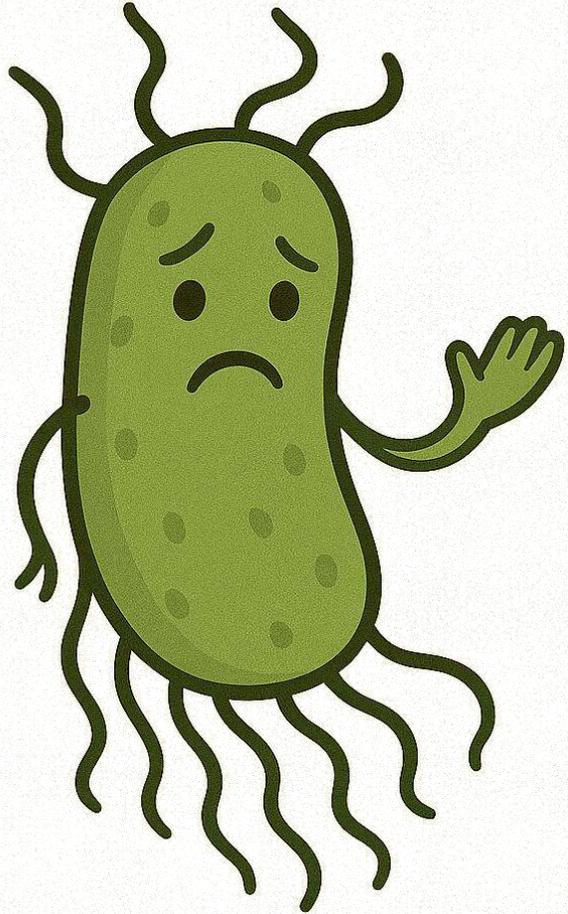
Test Description	Result	Units
Legionella pneumophila Sg 1	ND	cfu in vol
Legionella pneumophila Sg 2-15	ND	cfu in vol
Legionella Sp(non-pneumophila)	ND	cfu in vol
Volume Analysed for Legionella	1000	ml
Legionella Limit Of Detection	20	cfu/litre
Temperature at sampling, C	40.9	Deg C



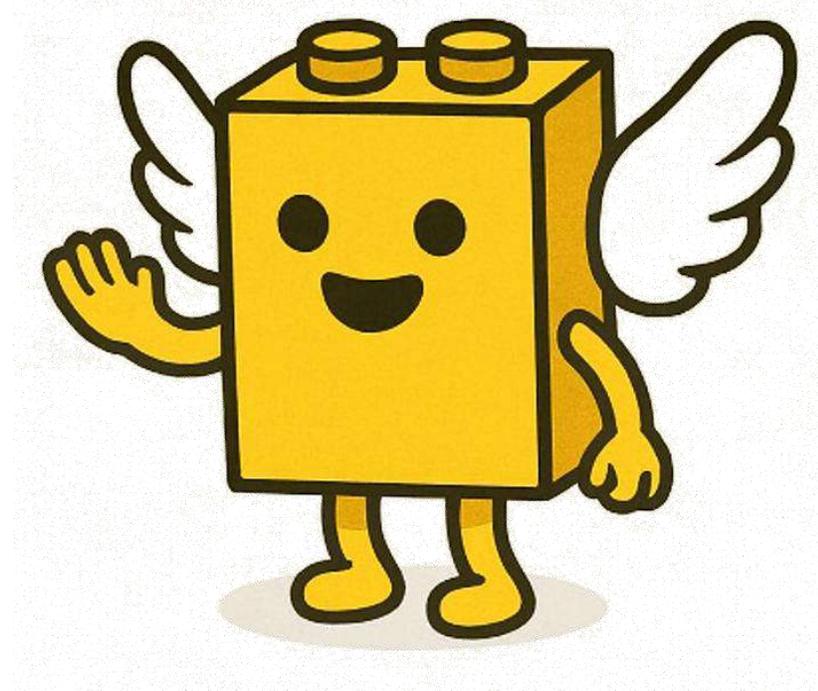
CUSTOMER:
 PROJECT NAME:
 DATE ANALYSED: August 22, 2024

Customer Sample number	1
Lab Sample number	1379
Description	
Sample type	Water (100mL)
Sample temperature	12°C
Procedure details	
Background flora	-
Reporting units	CFU/mL
<i>L. pneumophila</i> serogroup 1	ND
<i>L. pneumophila</i> serogroup 2-14	ND
<i>L. pneumophila</i> Total	ND
Other <i>Legionella</i> species	ND
TOTAL CFU	N/A
Detection Limit	5

Apples with Apples?



- Reporting units
- Limit of Detection (LOD)
- Action levels
- Pneumophila vs species
- Sample methods
- Analytical methods



Raw Data



Test Description	Result	Units
Legionella pneumophila Sg 1	ND	cfu in vol
Legionella pneumophila Sg 2-15	ND	cfu in vol
Legionella Sp(non-pneumophila)	ND	cfu in vol
Volume Analysed for Legionella	1000	ml
Legionella Limit Of Detection	20	cfu/litre
Temperature at sampling, C	40.9	Deg C

1 cfu/ml = 1000 cfu/litre

100 cfu/litre = 0.1 cfu/ml



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PROJECT NAME:
DATE ANALYSED: August 22, 2024

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<i>L. pneumophila</i> Total	ND
Other <i>Legionella</i> species	ND
TOTAL CFU	N/A
Detection Limit	5

Apples with Apples?



	Action levels cfu/litre	
	First	Highest
UK	100	1000
USA (AIHA)	10000	1000000



Environmental Monitoring

- Common units
- UK action levels

	Action levels cfu/ml
UK	0.1
USA	10

		1	2	3	4	5	6	7	8	9	10	11	12
USA cfu/ml	A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	B	Green	Green	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green
	C	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
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UK cfu/litre	A	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
	B	Red	Yellow	Yellow	Yellow	Red	Red	Red	Red	Yellow	Red	Red	Yellow
	C	Yellow	Red	Red	Yellow	Red	Red	Red	Red	Yellow	Red	Red	Red
	D	Red	Yellow	Yellow	Yellow	Red	Red	Red	Red	Yellow	Yellow	Yellow	Yellow
	E	Red	Red	Red	Yellow	Yellow	Red	Red	Red	Yellow	Red	Red	Red

Controls

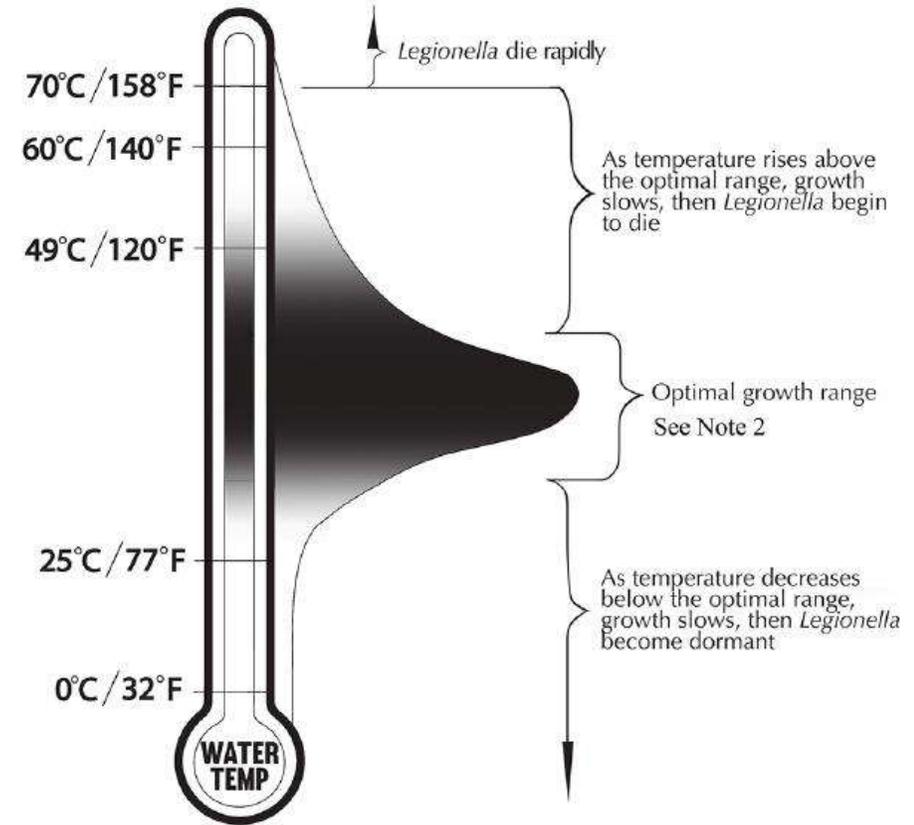
- Temperature
- Stagnation
- Nutrients
- Disinfection
- Filtration



- $< 20^{\circ}\text{C}$ within two minutes
 - Mains $< 20^{\circ}\text{C}$?
 - Green buildings/fittings
 - Global warming
 - Flushing
 - Sampling
 - Disinfection(s)
 - Cooling

Controls

- “Cold water: Store and circulate cold water at temperatures below the favorable range for Legionella (.... 25–45°C)”
- “Ensure disinfectant residual is detectable throughout the potable water system”



Controls – Cold Water

- “The water temperature should be 25°C or less (ideally water \leq 20°C)” ESGLI 2017
- < 25°C within 30 seconds
- Draw 5 x 1 litres

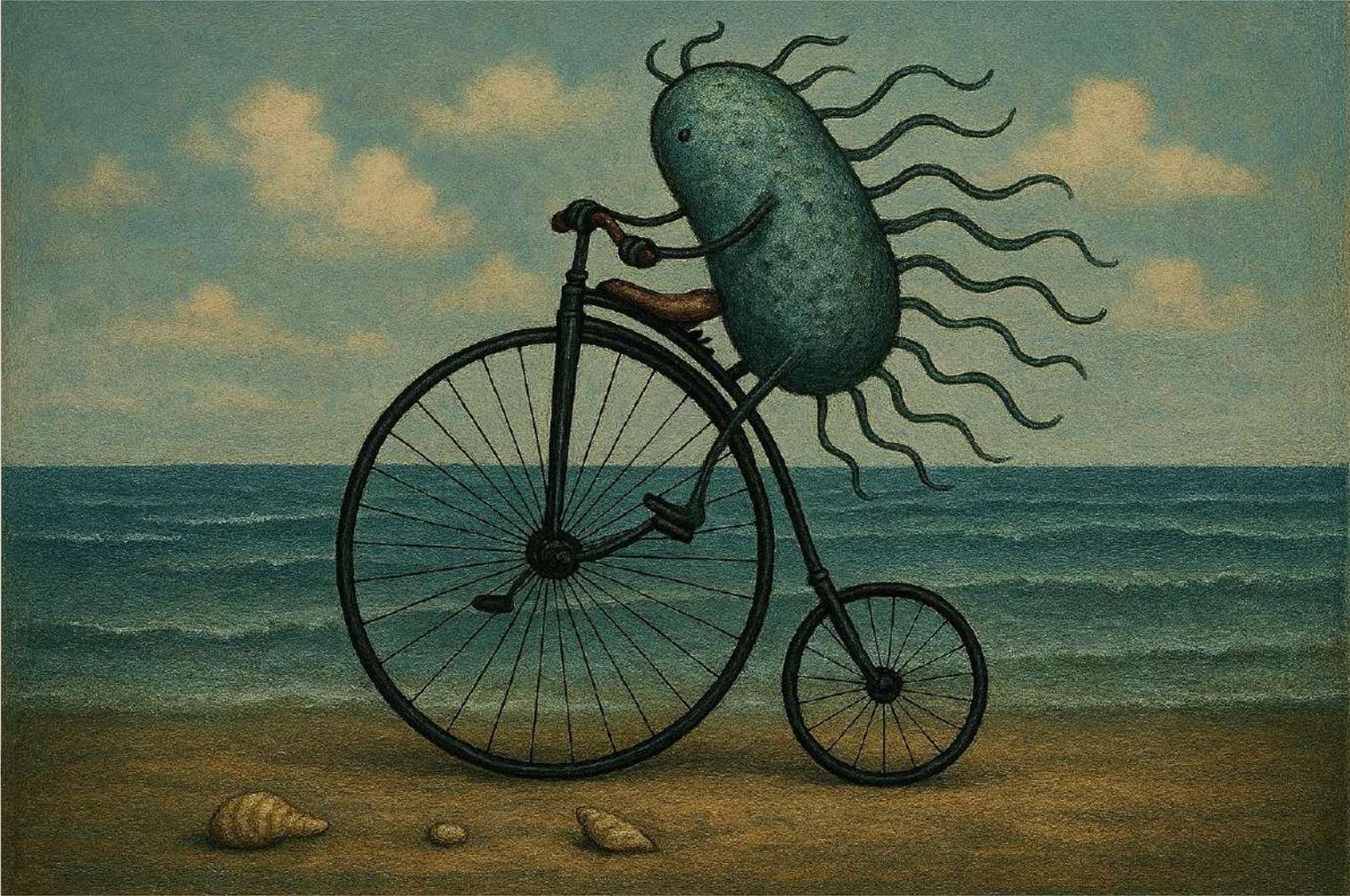
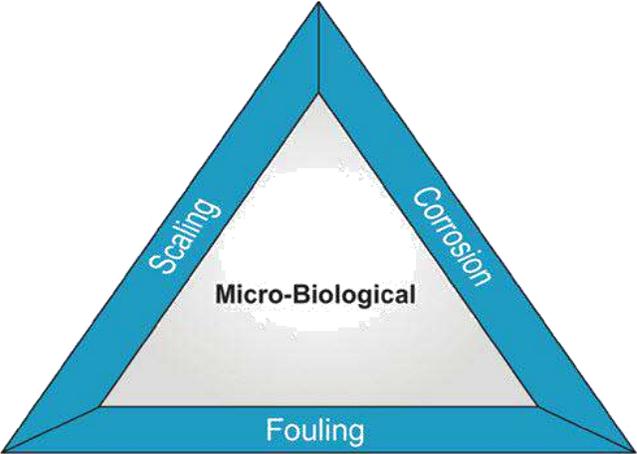


Conclusions

- Recognised hazard with common scientific basis
- Common themes but variability in regulatory frameworks and guidance
- Variability in enforcement
- Variability in priority systems and groups
- Variability in reporting and action levels
- Company standards?
- Standard designs?



Final Thoughts



Technical

Sales



Thankyou for listening

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