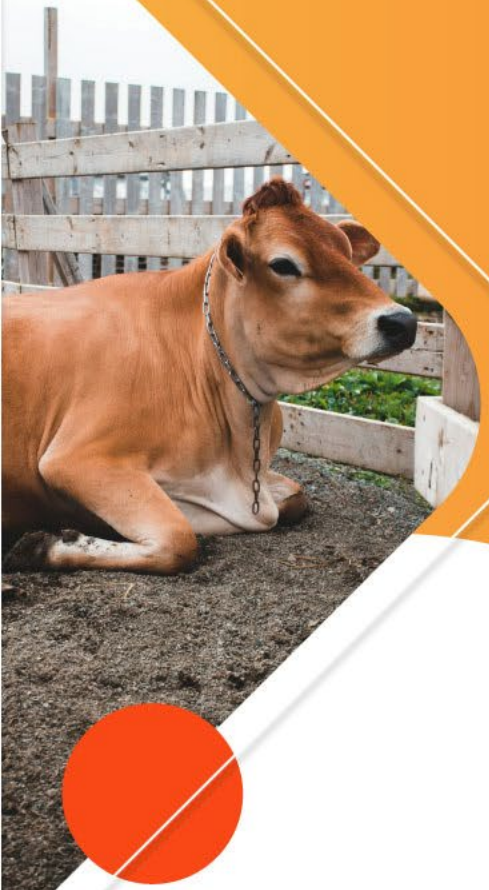
World Organisation for Animal Health

Regional Training Seminar for WOAH National Focal Points for Veterinary Laboratories (cycle III)

8 - 10 July 2025, Gaborone, Botswana



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Biological risk management ‘along the pathogen value chain’

Keith Hamilton

WOAH HQ, Paris, France

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Current position

- WOAH standard for managing biological risk in the veterinary laboratory and animal facility
- WHO Biosafety Manual 4th Edition

- ISO 35001:2019 – Biorisk Management for Laboratories and other related organizations
- CWA 15793:2008 Laboratory Biorisk Management Standard *(withdrawn)*

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The risk-based approach (adopted c. 2015 onwards)

- Flexible – not prescriptive
- Adapted to risk
- Adaptable to different settings and contexts
- More effective

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Some challenges

- Need competencies in risk analysis
- Gaps in evidence to inform commonly used risk mitigation measures
- Lack of transparency in terms of international reporting of laboratory acquired infections and pathogen escapes

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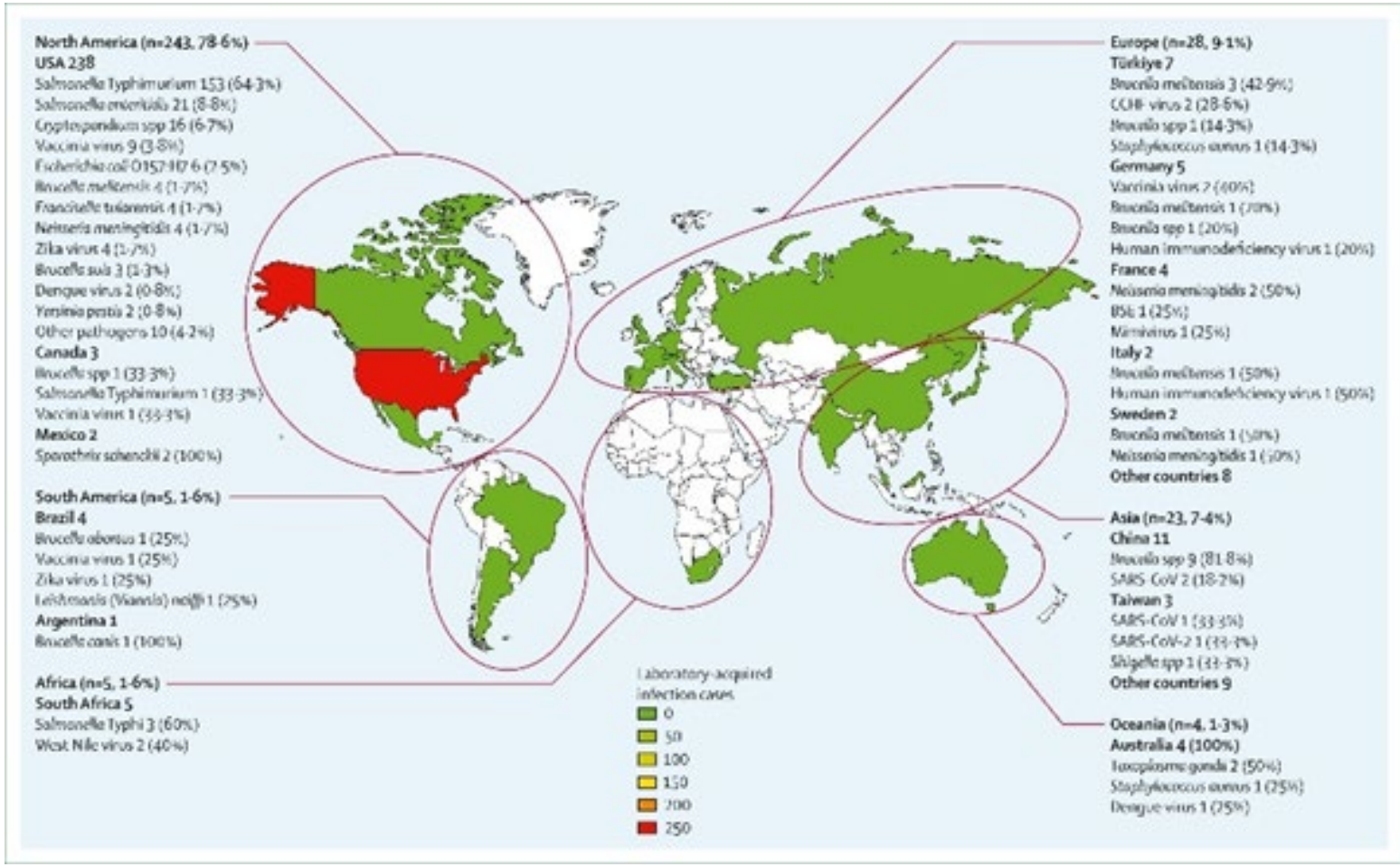
REVIEW: laboratory acquired infections and pathogen escapes between 2001 and 2021



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Key findings of the review

- reporting bias to countries which had formal systematised mechanisms for reporting laboratory accidents
- Under-reporting (voluntary nature of reporting)
- Many incidents a result of human error or deficiencies in procedures
- Gaps in reporting mean that valuable opportunities are being lost for continual improvement of the system through a process of monitoring and evaluation.

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Biosafety Research Roadmap

- highlighted critical gaps in the scientific evidence base underpinning laboratory biological risk management
- This led to calls for focused research to address such gaps, but because applied studies of this kind often fail to attract mainstream funders and investigators, it would be important to actively engage specialist funding bodies and research teams.
- Biological risk management guidance should recognise that risk analysis is sometimes carried out in the face of knowledge gaps. It could therefore also propose appropriate strategies to be used when evidence is lacking, such as the ‘hierarchy of controls’.

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Policy options for improved safety and security

‘Consideration needs to be given to the wider context of pathogen research in which laboratories exist. Many activities outside the laboratory environment are subject to very little oversight and governance. Attending to the risks presented by the whole chain of activity, from sample collection in the field to disposal of waste, is important.’

Chatham House Global Health Program, December 2023

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