

## Public Health Laboratory Network



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**The Public Health Laboratory Network had its inaugural meeting on 26 June 1997. The meeting was chaired by Professor Lyn Gilbert who played a pivotal role in establishing this group. This was the first time that all the state and territory public health laboratory directors had been called to meet together. Members expressed a strong desire to communicate more closely on issues of public health importance and recognised the importance of promoting the role of public health laboratories in outbreak investigations and routine and enhanced surveillance.**

The membership of PHLN includes laboratory directors who may be senior medical laboratory scientists and pathologists from the major pathology services in states and territories. PHLN also has some important observer members from agencies like private pathology, the Australian Federal Police, the Australian Animal Health Laboratory as well as observers from New Zealand's public health laboratories. PHLN and the New Zealand Microbiology Network also share cross membership.

The PHLN is a standing committee of and reports to the Australian Health Protection Principal Committee (AHPPC), which manages all health and emergency responses in Australia. Other standing committees of AHPPC include the Communicable Diseases Network Australia (CDNA), enHealth (Environmental Health Committee) and NHEMS (National Health Emergency Management Standing Committee).

From the PHLN Vision Statement, the PHLN aims to provide strategic advice and share expertise at the national level in order to enhance the national capacity for the laboratory based detection and surveillance of agents and vectors of communicable diseases in Australia. This is achieved by the sharing of knowledge and expertise within the PHLN, consultation with other laboratories, organisations and individuals with specialised expertise and

communication with other public and private pathology services in the jurisdictions.

### Terms of reference:

1. Establish, maintain and expand collaborative links between pathology laboratories that have a public health focus (including veterinary pathology that has human impact).
2. Promote best practice in all disciplines of public health pathology practice.
3. Improve nationwide access to a comprehensive range of pathology and laboratory services for control of communicable diseases.
4. Work collaboratively with other Australian Health Protection Principal Committee (AHPPC) standing committees and other relevant groups and organisations.
5. Provide strategic advice to the AHPPC to identify gaps and needs, and to ensure optimal use of existing pathology laboratory resources for communicable disease surveillance and for response to outbreaks of national importance.
6. Build on the existing capacity of public health laboratories to respond to communicable disease outbreaks and newly emerging infectious diseases.
7. Respond to matters relating to public health microbiology, as referred by AHPPC.
8. Fulfil these TOR to the best of our ability within resources available to support these activities.

Other Activities of PHLN:

Development of Laboratory-Case Definitions (LCDs) for the full range of bacterial and viral pathogens. These dovetail into CDNA's disease definitions. These LCDs are provided via the PHLN website and provide guidance to laboratories and public health personnel on the currently accepted and available testing protocols for a range of bacterial and viral agents. PHLN is frequently tasked with the preparation of position statements on various technique and methodologies, for example, the current state of play with PCR testing of *Neisseria gonorrhoeae*, and the implications of the TGA IVD Regulations on laboratory testing. In addition, PHLN has been asked to provide advice on a wide range of issues, e.g. infectious goods transport, safe handling of clinical samples from suspected viral haemorrhagic fever cases, laboratory containment, infection control guidelines, emergency response, laboratory funding, COAG, and non-performing kits.

When a new issue emerges, typically a working group will be formed to address the issue and prepare a statement on current laboratory capability to deal with the problem. For instance, PHLN has been closely involved in the work involving the detection of *Mycobacterium chimaera* from patients and associated heater-cooler units in hospital operating theatres. This generally involves close collaboration with CDNA.

Last year, the Australian Government Department of Health undertook a Laboratory Scoping Study to look at the capability for a wide range of agents across the country, with a view to developing a capability gap that identified where there were deficiencies in the public health laboratory system and to make recommendations about how best to address these. PHLN has formed a time-limited working group to progress and analyse this classified report.

There are a number of laboratory groups in Australia that specialise in the generation of data of public health significance, such as the Australian Gonococcal and Meningococcal Surveillance Programmes, the National Salmonella Reference Network, the National TB Advisory Committee (NTAC). These groups work closely with PHLN and individual PHLN members are active on several of these committees. In addition, PHLN members are involved as PHLN representatives on a wide range of committees, such as OzFood-Net, the CDNA Case Definitions Working Group, the National Surveillance Committee, CDNA, the Australian Strategic and Technical Advisory Group on Antimicrobial Resistance (ASTAG) and the National Arbovirus and Malaria Advisory Committee (NAMAC). PHLN maintains close links with the WHO Influenza Collaborating Centre, the Australian Animal Health Laboratory and the Australian Federal Police Forensic and Technical Intelligence. In the early 2000s, there was a considerable discussion on the subject of bioterrorism preparedness and this began to dominate PHLN proceedings. As a consequence, a separate group known as the Australian (counter) Bioterrorism Laboratory Network (ABLN) was formed to look specifically at laboratory aspects of bioterrorism response. A number of PHLN members as well as specific laboratory personnel are part of this group.

PHLN members are very keen to incorporate the latest technology into public health surveillance, and to this end a Whole Genome Sequencing Working Group was established to promote a common approach across public health laboratories in Australia. This work has now been taken on by the Trans Tasman Genomics Working Group, which has seen a number of public health laboratories in Australia and New Zealand sign on to an agreement to use common platforms and pipelines for the analysis of genomic data. PHLN laboratories have now been involved in a number of Multi Jurisdictional Outbreak Investigations (MJOI) involving different Salmonella serovars, and the ability to share data and compare isolates between States has been integral in tracking the size of the outbreaks and linking cases together.

## URLs

National Tuberculosis Advisory Committee: [www.health.gov.au/ntac](http://www.health.gov.au/ntac)

National Neisseria Network: <http://www.health.gov.au/internet/main/publishing.nsf/content/cda-pubs-cdi-2000-cdi2407-cdi2407b.htm>

Public Health Laboratory Network: [www.health.gov.au/phln](http://www.health.gov.au/phln)

Australian Strategic and Technical Advisory Group on Antimicrobial Resistance: <https://www.health.gov.au/internet/main/publishing.nsf/Content/.../ASTAG-TOR.docx>

National Arbovirus and Malaria Advisory Committee: [www.health.gov.au/internet/main/publishing.nsf/content/cda-arboanrep.htm](http://www.health.gov.au/internet/main/publishing.nsf/content/cda-arboanrep.htm)

## Relevant publications (available on the PHLN website)

Guidelines for the use and interpretation of nucleic acid detection tests for *Neisseria gonorrhoeae* in Australia

Laboratory precautions for samples collected from patients with suspected viral haemorrhagic fevers

National High Security Quarantine Laboratory Guideline for Management of Quarantinable Viral Haemorrhagic Fevers

Policy on antiviral prophylaxis and the implications for pathology and research staff

PHLN Guidance and Survey regarding Mycobacterium chimaera and heater-cooler units

PHLN Position Paper on Hendra Specimens for Transport within Australia

Referral of pneumococcal PCR positive samples to Australian Pneumococcal Reference Laboratories for molecular serotyping

Ensuring National Capacity in Genomics-Guided Public Health Laboratory Surveillance

Guidelines for the use and interpretation of nucleic acid detection tests for *Neisseria gonorrhoeae* in Australia

Policy on antiviral prophylaxis and the implications for pathology and research staff

## Biography

**John Bates** has 29 years experience as the Supervisor of the Public Health Microbiology Laboratory, and is responsible for coordinating the activities of a number of programs and for the provision of high quality and timely analytical work. He has specialised in the examination of bacteria of public health significance in food, water and environmental samples, and has achieved recognition for the application of a broad range of tools to the laboratory investigation of outbreaks. In addition, John is highly regarded nationally for his knowledge of laboratory aspects of diagnosis of bioterrorism bacterial agents.