Public Health Observatory
New Zealand Inc
Te Rōpū Mātai Hauora Pāpori
O Aotearoa

2025 Online Conference
16–18 July 2025

phonz25

Welcome

Welcome to PHONZ25, the fourth online conference of the Public Health Observatory of NZ Inc. PHONZ was established in 2022 to provide a network for people working and interested in health intelligence in New Zealand and internationally. Our online conference allows participants to hear about the work of others in the field, new developments, tools and applications, and establish contacts.

PHONZ25 has distinguished international and NZ-based speakers giving presentations on important themes such as *International Health Intelligence in Action*, and *The use of AI in Health Intelligence*. We are especially honoured that Professor Bev Lawton ONZM (Ngāti Porou), Kiwibank New Zealander of the Year (2025), is our keynote speaker. Professor Lawton has a highly distinguished career and is a pioneering force in women's health in Aotearoa and the founder/director of Te Tātai Hauora o Hine (the National Centre for Women's Health Research Aotearoa, Te Herenga Waka Victoria University of Wellington). She has received several distinguished awards recognising the importance of her work. Her advocacy led to New Zealand's historic shift to HPV self-testing as the primary method for cervical screening, making Aotearoa the first high-income country to do so.

We will again be running Mentimeter interactive word clouds as an opportunity for participants to respond in real time and share their thoughts on various questions about health intelligence. Another feature of PHONZ25 is the panel discussion at Friday lunchtime with expert guests from various organisations discussing the *Future of Health Intelligence in NZ.*

The Committee of PHONZ acknowledges the support we have received from Environmental Health Intelligence NZ (EHINZ), the Public Health Agency, the Ministry of Health, Health New Zealand, and the Ministry for Pacific Peoples.

Thank you for supporting PHONZ, and we hope you enjoy PHONZ25.

Te Kunenga ki Pūrehuroa Massey University
ehinz Environmental Health Intelligence New Zealand Rapu Mātauranga Hauora mo te Taiao – Aotearoa
Health New Zealand Te Whatu Ora
Te Pou Hauora Tūmatanui Public Health Agency
Ministry for Pacific Peoples Te Manatū mō ngā Iwi ō te Moana-nui-ā-Kiwa

Day 1
Wednesday 16 July

9:00–9:05
Welcome & Karakia
Barry Borman & Peter Himona

Chair **Barry Borman**

Start	Presenter	Title	
09:05–09:45	**Key note speaker** Professor Bev Lawton, New Zealander of the Year 2025	Founder & director of Te Tātai Hauora o Hine (the National Centre for Women's Health Research Aotearoa) at Victoria University of Wellington	Tūāpapa Māori - HPV Cervical Screening Program
09:47–10:07	Dr Paul Kavanagh	Interim Director, National Health Intelligence Unit, Health Service Executive (HSE)	Lessons Learned And Opportunities Ahead – Health Information As A Health System Asset For The Public Good In Ireland
10:09–10:29	Aaron Gorman	Public Health Agency, Belfast, Northern Ireland	The Population Health Model For Northern Ireland
10:30–10:50	Dr Shaun Grannis	Vice President, Data and Analytics, Regenstreif Institute, Indiana University School of Medicine	Using emerging AI techniques for real-world healthcare applications
10:52–11:12	Dr David McVea	Public Health Physician, British Columbia Observatory for Population and Public Health	Surveillance Of Climate-Related Environmental Hazards In British Columbia, Canada
11:15–11:35	Dr Kenyon Crowley	Health Data & AI Growth Lead, Accenture Federal Services	The Human + AI Public Health Workforce: Core Components for Public Health Reinvention
11:37–11:57	Dr. Mark Jacobs	Director of Pacific Technical Support and WHO Representative to the South Pacific	Surveillance In The Pacific
12:00–12:20	Discussion and Mentimeter		

Day 1
Wednesday 16 July (continued)

Chair **Dyfed Thomas**

12:22–12:42	Dr Vithya Yogarajan	Researcher, Division of Health, University of Waikato	Socially responsible and fair AI in Healthcare Applications in New Zealand
12:45–13:05	Dr Cheng Kai Jin	Clinical Director, Artificial Intelligence Laboratory, Health NZ	The Use of AI in Health New Zealand: Current Applications, Future Directions, and Lessons Learnt
13:07–13:27	Pedro Ramirez	Digital Strategy Practitioner - Public Service AI work programme, GDCO, NZ	Public Service AI Work Programme
13:29–13:49	Dr Sidong Liu	Australian Alliance for AI in Health Care, Macquarie University, Australia	Generative Artificial Intelligence for Synthetic Medical Imaging
13:51–14:11	Rooshan Ghous	Coordinator, Centre of Excellence | Technology, Whitecliffe Education, NZ	Long-Term Survival Insights Using Explainable AI: Role of DCIS in Invasive Breast Cancer
14:13–14:35	Discussion and Mentimeter		
14:35	Karakia and close - Tim Hopley		

Day 2
Thursday 17 July

9:00–9:05
Welcome and Karakia
Tim Hopley

Chair **Chris Skelly**

09:07–09:27	Dr Esther Hamblion	Unit Head, Public Health Intelligence Unit (PHI), WHO Health Emergencies Programme (WHE), Geneva, Switzerland	The role of WHO's Public Health Intelligence activities in enhancing global health security
09:29–09:49	Andre Fedeli and Louis Molloy	Public Health Wales NHS Trust, Cardiff, Wales	Designing with Purpose: A User-Led Dashboard for Primary Care Clusters in Wales
09:52–10:12	Lennie Lindberg	Head of the Department of Communicable Disease Control and Health Protection, Public Health Agency of Sweden, Stockholm, Sweden	Health Intelligence in Action from a Swedish perspective
10:12–10:29	Professor Heather McLeod and Matt Halstead	Heather McLeod & Associates; Ministry for the Environment, NZ	Climate Projections for Geographies that are Meaningful for Healthcare
10:29–10:51	Discussion and Mentimeter		

Day 2
Thursday 17 July (continued)

Chair **Corina Grey**

10:51–11:11	Dr Sarah Jefferies	Public Health Physician, New Zealand Institute for Public Health and Forensic Science Ltd, NZ	Integrating pathogen genomics into infectious disease surveillance and outbreak investigations in Aotearoa New Zealand taking a One Health approach
11:13–11:33	Dr Andrew Anglemyer	Senior Epidemiologist, New Zealand Institute for Public Health and Forensic Science Ltd, NZ	Invasive Pneumococcal Disease in New Zealand: Impact of a Changing Childhood Vaccine Schedule
11:35–11:55	Dr Hannah Cooper	Public Health Physician, New Zealand Institute for Public Health and Forensic Science Ltd, NZ	Epidemiology of invasive meningococcal disease in New Zealand in the first two years after the introduction of Bexsero to the childhood immunisation schedule
11:55–12:10	Discussion and Mentimeter		
12:10–12:30	Dr Kerry Sexton	Chief Clinical Advisor, Office of the Director of Public Health, Public Health Agency, Ministry of Health, NZ	Reporting Standards for Immunisations
12:31–12:51	Michelle Gourley	Head, Burden of Disease and Mortality Unit, Australian Institute of Health and Welfare, Canberra, Australia	Burden of disease for policy decisions: insights from Australia
12:53–13:13	Jacob Madden	Assistant Secretary, Australian CDC Establishment – Strategy, Canberra, Australia	The development of a Public Health Data Network: Australia's experience
13:15–13:35	Professor Michelle Haby	Centre for Health Policy, Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Australia	What is "health intelligence" and is it synonymous with "evidence-informed decision making"?
13:35–13:50	Discussion and Mentimeter		

Day 3
Friday 18 July

9:00–9:05
Welcome and Karakia
Peter Himona

Chair **Peter Himona**

09:05–09:25	Victoria Elliot	Principal Information Analyst, Scotland Public Health Observatory (ScotPHO), Edinburgh, Scotland	Introduction to the Scottish Public Health Observatory (ScotPHO) collaboration
09:27–09:47	Nevashan Govender	Division of Public Health, Surveillance and Response, National Institute of Communicable Diseases, Johannesburg South Africa	Behind the Scenes of COVID-19: The NICD's Role in the National Surveillance and Response
09:49–10:09	Dr Fiona Callaghan	Chief Advisor Epidemiology, Intelligence, Surveillance, and Knowledge (ISK), Public Health Agency, Ministry of Health, NZ	Infectious disease modelling capability at the NZ PHA
10:11–10:31	Dr Gary Jackson	Clinical Director, Planning & Population Health, Health NZ, NZ	Hospital service demand: a population health view
10:33–10:50	Discussion and Mentimeter		

Day 3
Friday 18 July (continued)

Chair **Tim Hopley**

10:50–11:10	Dr Jonathan Chua	Principal Advisor, Ministry of Health. NZ	A Behavioural Insights approach to inform public health intervention - attitudes and behaviours
11:12–11:32	Dr Anja Mizdrak	Senior Research Fellow, Department of Public Health, University of Otago (Wellington), NZ	Using Google Maps data for public health research: an honest feasibility assessment
11:34–11:54	Peter Himona	Senior Analyst, Māori Health Insights and Monitoring, Ministry of Health, NZ	Māori Data Sovereignty and Governance in the health sector
11:56–12:16	Dr Lynn Riggs	Senior Economist, Health NZ, NZ	A Brief Overview of Economic Evaluation
12:18–13:15	The Panel: Dr Kristie Carter, Dr James Greenwell, Richard Hamblin, Tim Hopley, Dr Nick Jones, Dr Alex Kazemi, Dr John McCarthy, Dr Maria Poynter	Public Health Agency, Ministry for Pacific Peoples, Health Quality and Safety Commission, Health NZ	The Future of Health Intelligence in NZ
13:15	Karakia and close – Peter Himona		

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Speaker bios and abstracts

Day 1
Wednesday 16 July

Professor Bev Lawton ONZM (Ngāti Porou)

Professor Bev Lawton ONZM (Ngāti Porou), is the founder/director of Te Tātai Hauora o Hine (the National Centre for Women's Health Research Aotearoa, Te Herenga Waka Victoria University of Wellington) and a pioneering force in women's health in Aotearoa.

Named Kiwibank New Zealander of the Year (2025), she has driven critical advancements in cervical cancer screening, maternal health, and Indigenous health equity. Bev's advocacy led to New Zealand's historic shift to HPV self-testing as the primary method for cervical screening – making Aotearoa the first high-income country to do so.

Bev previously worked as a general practitioner in Wellington for 17 years and co-founded the Wellington Menopause Clinic. These experiences led to an interest in research to address the many questions relevant to women's health and inequities. Working closely with kaumātua, Bev builds strong relationships with communities, ensuring research is relevant and innovative, and grounded in Māori community engagement. Her research on women's and children's health has led to changes in policy and practice in Aotearoa and internationally.

Bev was appointed an Officer of the NZ Order of Merit by the Queen for services to women's health in 2005 and made a Distinguished Fellow of the Royal College of General Practitioners in 2017. She was awarded the Royal Australia and New Zealand College of Obstetricians and Gynaecologists Māori Women's Health Award in 2020; the 2021 Women of Influence Award (Innovation, Science and Health); The Beaven Medal by the Health Research Council in 2023; and The Maarire Goodall Award by Te Ohu Rata o Aotearoa in 2024.

Presentation

Tūāpapa Māori - HPV Cervical Screening Program

Dr Paul Kavangh

Dr Paul Kavanagh, is Interim Director, National Health Intelligence Unit, Health Service Executive (HSE). He is a medical doctor (Trinity College Dublin, 1997), a registered specialist in public health medicine (Medical Council of Ireland Registration Number 021204), and holds postgraduate qualifications in Community Health, Health Economics, Medical Education, Healthcare Leadership and Data Science. In the past, he previously worked to establish INIsPHO, Ireland and Northern Ireland's Population Health Observatory, hosted at the Institute of Public Health. Currently, Paul is a Consultant in Public Health Medicine at the National Health Intelligence Unit providing epidemiological advice and public health support to health information system design, major national health service reform, population profiling, and health service planning and evaluation; in addition, he is Public Health Medical Advisor to the HSE Tobacco Free Ireland Programme. He is Adjunct Associate Professor at Trinity College Dublin, and a Board Member at the Institute of Public Health and Faculty of Public Health Medicine in Ireland.

Presentation

Lessons Learned And Opportunities Ahead – Health Information As A Health System Asset For The Public Good In Ireland

The World Health Organisation identifies Health Information as a key health system building block. This asset has been undervalued and underdeveloped in Ireland. While the constraint this created for building a better health system and better public health was recognised, the COVID-19 pandemic was a crucible moment which underscored the need for improvement. Ireland has an ambitious plan underway to improve health information and unlock its potential. This talk with reflect on lessons learned and opportunities ahead from an Irish perspective.

Aaron Gorman

Aaron Gorman is a data scientist at the Public Health Agency PHA in Northern Ireland, working on modelling population risk factors and outcomes for non-communicable diseases.

Aaron has been contributed to the agency's analytics and response efforts since the COVID-19 pandemic in 2020 as part of the wider data and engineering team in the PHA. Currently, we are working on tools and strategies to more effectively bridge epidemiology, data science, and public policy.

The Public Health Agency (PHA) is a multi-disciplinary body working closely with other partners to improve and protect the health of the population across Northern Ireland.

Presentation

The Population Health Model for Northern Ireland

The Population Health Model from the Public Health Agency is a broad-scope and holistic statistical health forecasting and scenario model. It uses microsimulation to build a high-fidelity synthetic population of Northern Ireland's demographic and health distribution and proceeds to transition each hypothetical individual on a plausible life course to project individual health outcomes. It can give intelligence on the population-level burden of disease from these aggregate outcomes, allowing disease to be driven by demographic shifts and risk factor prevalence.

It has the capability to model a breadth of non-communicable diseases and causally contributing risk. This includes site-specific malignant neoplasms, cardiovascular diseases (including Stroke, diabetes and kidney disease), dementia, and some minor chronic respiratory and musculoskeletal diseases. The most innovative capability is the implementation of a high-resolution and authentic risk engine. We use this capability to pose interventions to prevent NCDs by implementing public health campaigns, access to green spaces and infrastructure and/or services, screening initiatives and pharmaceutical rollout.

Dr Shaun Grannis

Dr Shaun Grannis is Vice President of Data and Analytics at Regenstrief Institute, Regenstrief Chair in Medical Informatics at Indiana University School of Medicine (IUSM), and a professor of Family Medicine at IUSM. He is an internationally recognised expert in health data infrastructure, patient matching, and real-world data analytics, with research focused on advancing population and public health through scalable data integration, predictive modelling, and fusion of clinical and social determinants of health data. Dr Grannis earned his BS in Aero/Astronautics from MIT, completed pre-med at Harvard, received his MD from Michigan State University, and earned an MS in Clinical Research and Medical Informatics from Indiana University. He is a Fellow of the AAFP, ACMI, and AMIA.

Presentation

Emerging AI Techniques For Real-World Healthcare Applications

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Dr David McVea

Dr David McVea is a public health physician specialised in environmental health working at the British Columbia Centre for Disease Control. He completed combined MD/PhD training at the University of British Columbia, before completing a Public Health and Preventative Medicine residency, also at the University of British Columbia. He undertook specialised training in epidemiology and environmental health as a member of the Public Health Agency of Canada's Field Epidemiology Program before his current role.

Presentation

Surveillance of climate-related environmental hazards in British Columbia, Canada

British Columbia, the westernmost province in Canada, is experiencing rapid effects of climate change, including extreme heat, flooding and wildfires. The British Columbia Centre for Disease Control is the provincial agency responsible for developing and implementing surveillance of these hazards, and for coordinating the public health to the resulting health risks. I will give an overview of surveillance and response to climate-related environmental hazards in British Columbia and introduce innovative surveillance systems for indoor temperatures, health impacts of wildfire smoke, and cyanobacteria blooms.

Dr Kenyon Crowley, PhD, CPHIMS
Managing Director, Health Data & AI Lead
Accenture Federal Services

Dr Kenyon Crowley directs innovation and growth at the intersection of health and artificial intelligence across the Federal Health sector. As a health informaticist, he delivers cutting-edge programs and solutions merging health data science, information system design, and responsible AI to his Federal clients. Before joining Accenture, he served as Managing Director of a Digital Health Research Center of Excellence and Health Insights AI Lab at the University of Maryland, orchestrating a broad portfolio of research and development programs and partnerships that created ground-breaking products and scientific findings, and he continues to serve as faculty at the Robert H. Smith School of Business. He has envisioned, built, and evaluated AI & digital health solutions from concept to clinical trial to market and to next generation. His collaborative portfolio spans federal agencies, startups, Fortune 500 companies, and healthcare providers and payers. Dr Crowley's work has earned international recognition at premier conferences, with his teams clinching national health informatics design competitions. He has served as a scientific reviewer for the National Science Foundation and the National Institutes of Health, an advisor on data innovation to the National Committee on Vital and Health Statistics, and as a Health XPrize mentor. When he is not creating and delivering AI solutions, you may find him kayaking the Chesapeake waterways, enjoying live music, or entertaining his wife and children.

Presentation

The Human + AI Public Health Workforce: Core Components for Public Health Reinvention

As AI technologies proliferate, public health leaders have a unique opportunity—not just to enhance efficiency, but to advance new ways protecting and promoting population health. The reinvention of public health requires understanding the fundamental building blocks that enable AI agents to work seamlessly alongside humans in effective and responsible ways.
This presentation deconstructs the technical, organizational, and human considerations necessary to realize a future where intelligent agents serve as collaborative partners in protecting population health, grounded in the experience of advancing public health digital strategy and transformation with several of the largest and most complex U.S. federal health organizations.

Dr Mark Jacobs

Dr Mark Jacobs is the WHO's Director of Pacific Technical Support and WHO Representative to the South Pacific. He was appointed in this position in August 2021. Prior to this, he has held a series of senior public health leadership roles.

Dr Jacobs was previously the WHO Representative to Lao People's Democratic Republic from November 2018 to August 2021. From May to October 2018, Dr Jacobs was Acting Director of Programme Management for WHO in the Western Pacific Region. He was also previously the Director of Communicable Diseases in the Region for 5 years.

Before joining WHO, he was New Zealand's Director of Public Health for 9 years and managed the Public Health Programme at the Secretariat of the Pacific Community for 3 years. He also spent several years in Director of Public Health roles for state health authorities in Australia.

Dr Jacobs' interests include developing healthy public policy, strengthening disease surveillance, strengthening all hazards emergency preparedness, and working across sectors to improve health. He holds a Bachelor of Medicine, Bachelor of Surgery, a Graduate Diploma in Health Services Management and a Master of Public Health.

Presentation

Surveillance in the Pacific

Pacific Island Countries continue to face a wide range of health threats, including many communicable diseases and a very heavy and growing burden of NCDs. They are also on the frontlines of the worsening impacts of climate change, those impacts including increasing a range of communicable and non-communicable disease risks. Strengthening surveillance systems is a key shared priority in the Pacific and a major focus for WHO's work in the Pacific. The presentation will summarise approaches to surveillance in the Pacific, provide some examples of the sorts of data that are available, and discuss initiatives to further strengthen surveillance.

Dr Vithya Yogarajan

Dr Vithya Yogarajan is a a Researcher at the Division of Health, The University of Waikato. She is am working on projects that aim to achieve equitable cancer outcomes for lung cancer patients, as well as improve the management of diabetes and cardiovascular disease. Additionally, her research focuses on bias in language models and aims to develop a deeper understanding of the area. This research has provided Vithya with the backbone of knowledge in limitations, especially with the bias-related research impact on the NZ population. She has several publications on addressing bias in high-impact venues. Dr Yogarajan has extensive experience working on multi-disciplinary projects with academic and community impact in artificial intelligence and healthcare and published several papers at the intersection of AI and healthcare, including those that directly impacted NZ society. She has also won best-paper awards for such publications. Vithya has received several successful funding grants as the principal investigator and named investigator, and has almost a decade of experience working in the NZ healthcare sector and several years of teaching tertiary students in NZ. She was a selected expert panellist on AI and healthcare with the Office of the Prime Minister's Chief Science Advisor.

Presentation

Socially responsible and fair AI in Healthcare Applications in New Zealand

Developments in Artificial Intelligence (AI) and data-driven technology are used to make clinical diagnoses, decisions, and treatment protocols. New Zealand (NZ) healthcare providers are increasingly using AI to reduce the administrative workload associated with clinical care. Although health inequalities can directly reflect human biases, the introduction of and use of AI in healthcare come with their own biases and disparities. AI is prone to reinforcing bias, triggering a need for legislative improvements, including data governance, as reflected in the recent modifications to the US HIPAA regulations and the GDPR in Europe. In New Zealand, the ongoing health system reforms are expected to provide opportunities and a platform for health equity. Moreover, in December 2023, the Office of the Prime Minister's Chief Science Advisor published a report on the deployment of AI in NZ's healthcare system, which included recommendations on the safe and ethical use of AI in NZ healthcare.

A fundamental requirement for being socially responsible is a trustworthy system. Understanding bias in data and AI model development, and the ability to mitigate bias in the development and deployment of technologically advanced systems, are key steps toward being socially responsible. This includes not blindly trusting the results generated by AI. To ensure safety, security and fairness, AI systems need to be verified and validated in alignment with the objectives for which the system was designed.

Additional measures will need to be taken to ensure fairness in AI, with rigorous built-in evaluation of potential biases and prioritisation that enhances equity, particularly for Māori, Pacific, and other priority communities. The AI tools must be both trusted and trustworthy. As such, the development of AI tools requires explainable predictions and outcomes secured by effective and well-communicated audits and evaluations. Moreover, socially responsible and fair AI in healthcare applications require collaboration with health professionals, clinicians, representatives from underrepresented populations, and active participation in the development of these algorithms.

This presentation will provide an overview of the aspects required to incorporate socially responsible and fair AI in healthcare applications, using New Zealand examples.

Dr Cheng Kai Jin

Dr Cheng Kai (CK) Jin, a clinician by training, has taken an atypical path in medicine wishing to combine data science with healthcare. He has been working at this intersect for over the last 5 years, supporting the COVID-19 response within his last role. He is currently the clinical director for Health NZ's AI laboratory, responsible for safely introducing AI technologies at Health NZ. Dr Jin's unique perspective as both a clinician and data scientist enable him to navigate the complex challenges of healthcare AI adoption, addressing clinician concerns to ensuring patient safety and regulatory compliance. His experience spans predictive modelling, clinical decision support systems, generative AI and the development of frameworks for responsible AI use in healthcare settings.

Presentation

The Use of AI in Health New Zealand: Current Applications, Future Directions, and Lessons Learnt

Artificial intelligence (AI) is playing an increasingly important role within Health New Zealand (Health NZ), supporting efforts to improve clinical decision-making, optimise operational efficiency, and enhance patient outcomes across a range of services. This presentation will provide a comprehensive overview of the current landscape of AI adoption within Health NZ, including examples of where AI is already being applied and the broader vision for future expansion.

A key focus of the presentation will be on the critical processes required to ensure that AI technologies are tested, validated, and safely integrated into clinical workflows. Using diabetic retinopathy screening as a case study, we will explore Health NZ's approach to AI implementation in this context. The lessons learned from this work not only inform the safe and effective use of AI in diabetic eye screening but also provide a roadmap for broader AI adoption across other areas of the health system.

Pedro Ramirez

Pedro Ramirez brings over two decades of senior leadership experience in the digital and data sectors across various jurisdictions. Currently, Pedro is at the forefront of the Public Service Artificial Intelligence work programme under the GCDO.

Presentation

Public Service AI work programme

The presentation will focus on the Public Service AI Framework and the Public Service work programme

Dr Sidong Liu

Dr Sidong Liu is a computer scientist specialising in multi-modal biomedical data analysis, with over a decade of experience in artificial intelligence (AI), medical image analysis, and biomedical informatics. A key milestone in his career was the establishment of the *Translational AI for Healthcare* research stream within the Australian Institute of Health Innovation at Macquarie University. His multidisciplinary team is dedicated to embedding AI into routine healthcare practice to improve patient outcomes. Dr Liu's research program involves close collaboration with government agencies (e.g., TGA, NSW Health), healthcare providers (e.g., Macquarie Neurosurgery, Melanoma Institute Australia), professional bodies (e.g., Standards Australia), and industry partners (e.g., Fujitsu, Weburban). His work addresses real-world challenges in healthcare AI implementation, including improving model performance across diverse clinical settings, ensuring data privacy during training, and reducing computational demands for scalable deployment. Notably, Dr Liu's team has made significant contributions to cancer care through AI-driven analysis of histopathology images. In partnership with clinical collaborators, they have developed AI tools for critical oncology tasks, such as predicting immunotherapy response in melanoma and identifying genetic biomarkers in brain tumours—supporting real-time, personalised treatment decisions and advancing the integration of AI into precision medicine.

Presentation

Generative Artificial Intelligence for Synthetic Medical Imaging

Generative Artificial Intelligence (GAI) is reshaping medical imaging by enabling powerful new approaches to image synthesis, enhancement, and analysis. By integrating generative models into imaging workflows, we are witnessing their transformative impact on diagnostics, treatment planning, and patient care across clinical and healthcare settings. In this talk, I will present two examples of GAI in synthetic medical imaging and their applications in supporting clinical decision-making: (1) virtual staining of histopathology images to support melanoma treatment planning, and (2) the synthesis of positron emission tomography (PET) and advanced MRI data to assist in brain tumour diagnosis

Rooshan Ghous

Rooshan Ghous is the Centre for Research Excellence and Postgraduate Programme Coordinator at Whitecliffe Education Limited. Her research interests lie in the development of responsible AI based solutions for healthcare using multidisciplinary approach.

Presentation

Long-Term Survival Insights Using Explainable AI: Role of DCIS in Invasive Breast Cancer

Ductal carcinoma in situ (DCIS), referred to as stage 0 breast cancer, is non-invasive and generally non-life-threatening. However, its prognostic significance when co-existing with invasive carcinoma remains less explored. In the course of a broader analysis aimed at predicting survival outcomes using Explainable Artificial Intelligence (XAI), we unexpectedly identified a potentially important association between DCIS presence within invasive breast lesions and long-term survival outcomes. This finding prompted a focused investigation.

We analysed data from women diagnosed with invasive breast cancer (with or without concurrent DCIS) in New Zealand between 2002-2017, utilising over 250 clinical variables from Te Rēhita Mate Ūtaetae, the Breast Cancer Foundation NZ National Register, through Explainable Artificial Intelligence methods.

Our findings reveal that the presence of DCIS within invasive lesions is a particularly strong and consistent marker of improved long-term survival compared to purely invasive disease. This previously underappreciated relationship highlights how Explainable AI can uncover non-obvious patterns within high-dimensional clinical datasets. These results suggest DCIS co-occurrence may serve as a favourable prognostic marker, with potential applications in patient risk stratification and personalized treatment planning.

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Dr Esther Hamblion

Dr Esther Hamblion is an epidemiologist in the World Health Organisation's Health Emergencies Programme and is currently the unit head of the Public Health Intelligence unit at WHO headquarters in Geneva, Switzerland. Previously Esther was at the WHO's Regional Office for Africa supporting the response to outbreaks with a focus on strengthening surveillance systems for data collection, collation and analysis to better target intervention activities. Prior to that she was based at the WHO country office in Liberia, where she led the WHO epidemiology team during the Ebola response and subsequent recovery and health system strengthening phases. Esther previously worked at Public Health England in their field epidemiology services.

Presentation

The role of WHO's Public Health Intelligence activities in enhancing global health security

The World Health Organisation (WHO) implements a robust approach to public health intelligence (PHI) for the global detection, verification and risk assessment of acute public health threats. WHO's PHI operations are underpinned by the International Health Regulations (IHR), which require that countries strengthen surveillance efforts, and assess, notify and verify events that may constitute a public health emergency of international concern (PHEIC). PHI activities at WHO are conducted systematically at WHO's headquarters and all six regional offices continuously, throughout every day of the year. PHI is a key feature of global health architecture to support global health security, and this presentation will describe WHO's operational public health intelligence activities.

André Fedeli

André Fedeli is a Senior Public Health Intelligence Analyst, Public Health Wales. He joined Public Health Wales as an Analyst back in January 2020, shortly before the onset of the COVID-19 pandemic. During his first 18 months, much of his work was centred around COVID-related data, including a redeployment to the Surveillance Team. As of 2022, André's main project work has involved creating interactive public facing dashboards. For the last 2 years, he has been working on the Primary Care Cluster Dashboard project, taking over as Project Lead in October.

Louis Molloy

Louis Molloy is a Public Health Intelligence Analyst, Public Health Wales. His background is primarily in academia, spending the last 4 years completing a PhD in psychology and health economics, while working various research and data analysis role's part time. Louis has been with Public Health Wales for just over 12 months, working primarily on the Primary Care Clusters dashboard.

Presentation

Designing with Purpose: A User-Led Dashboard for Primary Care Clusters in Wales

Primary care clusters bring together the collaborative leads from each local health profession (Pharmacy, GMS, Optometry and Dentistry) and other sectors like Allied Health Professionals and Third Sector operators within a cluster. Across Wales, there are over 60 primary care clusters within 7 local health boards. Colleagues at Public Health Wales, as part of our integrated medium-term plan, have completed the development of a user led Primary Care Cluster population health dashboard linked to primary care public health information and support, which will support a range of users and inform planning conditions and be our flagship local area output. The dashboard was produced in and iterative and agile way, being developed in stages and with user feedback at the centre of the analysis throughout. The result is a fully interactive, accessible dashboard with data on demographics, low birth weight, breastfeeding at 10 days, mortality, avoidable mortality, chronic conditions, emergency admissions and mapped deprivation data.

Lennie Lindberg

Lennie Lindberg is Head of Department of Communicable Disease Control and Health Protection at The Public Health Agency of Sweden. He has a background as a Clinical Nurse Specialist and licensed psychotherapist.

Presentation

Health Intelligence in Action from a Swedish perspective

The Public Health Agency of Sweden is fundamental in health intelligence and surveillance, focusing on key areas to promote and protect public health. Its main activities include monitoring and controlling infectious diseases, tracking antibiotic resistance, managing national vaccination programs, and promoting public health through knowledge dissemination. The presentation will give a short overview regarding Sweden's surveillance and health intelligence work focusing on communicable diseases.

Professor Heather McLeod

Professor Heather McLeod is an actuary by training and worked in healthcare financing, health policy and social security policy for more than 30 years. She is originally from South Africa where she consulted to the National Treasury and Department of Health, served on statutory bodies, and taught at several universities. Heather is an Adjunct Professor, Actuarial Science, University of Cape Town, and Extraordinary Professor, Department of Statistics and Actuarial Science, University of Stellenbosch

Heather married a Kiwi and has lived in Aotearoa since 2010. She worked for the Ministry of Health, and has consulted to the Ministry of Health, Te Whatu Ora, District Health Boards, Hospice New Zealand, and other NGOs on the impact of an ageing population on healthcare at the end of life.

In 2020 Heather changed fields and works increasingly on climate change and environmental issues. She completed a Masters in Climate Change Science and Policy and currently works for the Ministry for the Environment. She is a country girl at heart and lives with her horses in Hanmer Springs.

Dr Matt Halstead

Dr Matt Halstead is currently a Principal Data Scientist at the Ministry for the Environment, and a Data Scientist and Software Developer for Figure.NZ. My background is in Marine Biology and Computer Science, with a PhD in experimental and computational neuroscience. I've worked across industry for the past 23 years in bioengineering, health data systems, wearable fitness technologies, and with the New Zealand Customs Service. I'm happiest when working on data and analysis that benefit society and the environment.

Presentation

Climate Projections for Geographies that are Meaningful for Healthcare

Climate change is likely to have a range of adverse impacts on health and wellbeing, including through climate extremes and sudden-onset disasters, such as floods, extreme storms, wildfires and heatwaves. Not everyone will be equally affected by these negative impacts of climate change, with vulnerable populations more likely to be disproportionately affected.

The EHINZ Social Vulnerability Indicators provide information about people and measures of vulnerability using census data. The indicators are produced at a range of geographies, to identify vulnerable groups at local levels.

This presentation explains how historical climate and climate projections for the near future, mid-century and late-century can be summarised at the same scales. This provides the essential linkage between hazard, exposure and vulnerability to support research on health and climate change, and work on climate adaptation.

Dr Sarah Jefferies

Dr Sarah Jefferies is a Public Health Physician at the New Zealand Institute for Public Health and Forensic Science (formerly ESR), specialising in national communicable disease surveillance and outbreak response. She provides public health strategic and technical advice on behalf of the Public Health Agency including on national and international surveillance planning, risk assessment and epidemic intelligence and response. Sarah has led various national outbreak investigations and surveillance development activities, and was the Health Intelligence lead for the implementation of routine pathogen genomic surveillance at ESR. Sarah has experience working in surveillance and outbreak response in the Pacific region as well as supporting various regional and international pathogen genomic surveillance development initiatives.

Presentation

Integrating pathogen genomics into infectious disease surveillance and outbreak investigations in Aotearoa New Zealand taking a One Health approach

The Institute of Environmental Science and Research (ESR) began building laboratory capacity for routine whole genome sequencing (WGS) in 2016. Integrated pathogen genomic surveillance is rapidly enhancing public health capability to characterise pathogens, facilitate One Health approaches to emerging infectious diseases, detect outbreaks, understand the pathways of pathogen transmission, attribute sources, and apply multi-pronged response measures. Co-ordinating the application of this technology across disciplines is integral to tackle emerging infectious diseases, particularly in the context of our rapidly changing environments and dynamic food chains. This presentation reflects on our recent experiences of integrating WGS into infectious disease surveillance and outbreak investigations with the example of emergent *Vibrio parahaemolyticus*.

Dr Andrew Anglemyer

Dr. Andrew Anglemyer is an epidemiologist who specializes in infectious diseases and study design methodology at ESR (Institute of Environmental Science and Research) and a Research Associate Professor at University of Otago (and previously at University of California, San Francisco). Previously, he was a member of the World Health Organization's HIV Treatment Guidelines development committee and the Epidemiology Editor for Cochrane Reviews. He has co-authored more than 80 papers covering a wide range of public health and clinical topics including HIV prevention and treatment in high-risk populations, firearms-related injury, paediatric encephalitis, hyponatremia, among other studies of infectious diseases. Andrew served in the U.S. Army from 1996-2001 before earning an MPH (Biostatistics) and PhD (Epidemiology) at Berkeley in 2010.

Presentation

Invasive Pneumococcal Disease in New Zealand: Impact of a Changing Childhood Vaccine Schedule

In Aotearoa New Zealand, the National Immunisation Programme (NIP) has had several changes since pneumococcal conjugate vaccine (PCV) was first introduced in 2008. As a result of a rapidly changing invasive pneumococcal disease (IPD) epidemiology, including strong evidence of serotype replacement from serotype 19A, PCV13 was reintroduced to the NIP in December 2022. In the current analysis, we update the IPD epidemiology and investigate the effects of the recent change to the NIP.

Using IPD surveillance data from a national-level notifiable disease surveillance system maintained by the Institute of Environmental Science and Research (ESR), we summarise the changing epidemiology and compare incidence rates in different PCV eras.

In the two years following the change from PCV10 to PCV13 in the NIP in NZ, the total incidence rate among children under 2 years of age IRR=0.43 (95% CI 0.27-0.67) and 0.56 (95% CI 0.34-0.92) for children 2-4 years of age. In 2024, IPD incidence among 65+ was slightly higher than 2023, though PCV13-specific incidence began to decrease. IPD incidence remains disproportionately higher for Maori and Pacific peoples relative to European/others.

Significant impacts of the change from PCV10 to PCV13 were limited to children under 2 years, likely as a result of direct protection from PCV13 for newborns beginning in December 2022, though children born before that time would have only been eligible for PCV10. The timely change in pneumococcal vaccine and subsequent incidence decreases underscore the importance of epidemiology-driven decisions.

Dr Hannah Cooper

Dr Hannah Cooper is a public health physician at ESR and leads the vaccine-preventable disease surveillance portfolio. She is a Fellow of the New Zealand College of Public Health Medicine. Prior to undertaking her specialist training, she worked in infectious disease surveillance at the New York City Department of Health.

She earned her MBChB and MHSc from the University of Auckland, and MPH (Epidemiology & Biostatistics) from the Harvard T.H. Chan School of Public Health.

Presentation

Epidemiology of invasive meningococcal disease in New Zealand in the first two years after the introduction of Bexsero to the childhood immunisation schedule

4CMenB (Bexsero), a multicomponent recombinant vaccine that protects against Group B meningococcal disease, was added to the childhood immunisation schedule on 1 March 2023 with catch-up vaccination funded for children up to 5 years of age. Bexsero is also funded for certain other groups, including people aged 13-25 years in defined close living situations.

This presentation describes the epidemiology of group B and non-B meningococcal disease in New Zealand since the introduction of Bexsero to the schedule, and considers the impact of the COVID-19 pandemic response measures on meningococcal disease trends in New Zealand.

Jacob Madden

Jacob Madden is the Assistant Secretary of the Australian Centre for Disease Control Establishment Strategy Branch at the Australian Government Department of Health, Disability and Ageing. In this role he leads the policy and strategic design for a new CDC in Australia, including developing legislation and negotiating with state and territory governments. He is also responsible for a program of work to modernise data sharing for public health purposes in Australia, including legislative reform, governance and technology.

Prior to this role Jacob led the Department's response to COVID-19 and other emergencies in aged care settings.

Jacob holds a Master of Public Health from the Australian National University and a Bachelor of Laws (Hons)/Bachelor of Arts from the University of Notre Dame Australia.

Presentation

The development of a Public Health Data Network: Australia's experience

The presentation will provide an overview of the work to establish the Australian Centre for Disease Control as an evidence-based, data-driven organisation. This includes the creation of a public health data network with clear authorisations for data sharing and the use of linked data assets to guide public health decision making. The presentation will provide an outline of work underway across governance, capability and technology.

Dr Kerry Sexton

Dr Kerry Sexton is a Chief Clinical Advisor and Public Health Physician in the Office of the Director of Public Health at the Ministry of Health. She has a wide range of Public Health experience with a particular focus on population-based screening programmes, immunisation and surveillance.

Presentation

Reporting Standards for Immunisations

Dr Sexton will present on the work being undertaken in the Public Health Agency (PHA) to determine a reporting standard for the strategic-level reporting of childhood immunisation data. The presentation will include the aims of the work, findings from an international review, early recommendations, some remaining challenges.

Michelle Gourley

Ms Gourley is the current Head of the Burden of Disease and Mortality Unit at the Australian Institute of Health and Welfare (AIHW) which is Australia's national agency for collecting, analysing and reporting on health and welfare data. She has over 10 years' experience in providing national leadership on work on burden of disease in Australia, including leading current work on the Australian Burden of Disease Study. She is also the current data custodian of the AIHW's National Mortality Database, which is a key data source used to report on cause of death statistics in Australia. Prior to working in burden of disease, Ms Gourley spent many years' leading work on Indigenous health statistics. During her career she has led the development and release of a wide range of publications by the AIHW which provide the evidence base for informing key health policy questions and health priorities for Government decision makers.

Presentation

Burden of disease for policy decisions: insights from Australia

This presentation will provide an overview of the Australian Burden of Disease Study (ABDS) which has been undertaken by the Australian Institute of Health and Welfare since 1996. It will showcase unique methods used in the ABDS and differences to the Global Burden of Disease Study. Examples of how ABDS results have been used to support health policy decisions in Australia will also be presented as well as innovations planned for the 2026 study release.

Associate Professor Michelle Haby

Dr Michelle Haby is an Australian epidemiologist, Professor, Faculty of Biological and Health Sciences, University of Sonora, Mexico Honorary A/Professor, Centre for Health Policy, Melbourne School of Population and Global Health, University of Melbourne, Australia. She has lived and worked in northwest Mexico for the past 12 years. Michelle has over 30 years of experience in both academia and government, and has also worked as a consultant on many projects for the Pan American Health Organization and the World Health Organization over the past 12 years. While she has a broad experience that includes descriptive epidemiology, investigation of risk factors, economic evaluation, systematic reviews, and guideline development, her focus and key interests are disease prevention and improving the use of research evidence in policy decision-making. Michelle has a MAppSc and a PhD in public health from the University of Sydney.

Presentation

What is "health intelligence" and is it synonymous with "evidence-informed decision making"?

Health intelligence, unlike some other key areas of public health, does not have a globally agreed definition. Currently, the term health intelligence is used in different ways, and with potential overlap with other key areas of public health practice, including public health surveillance, data analytics, artificial intelligence, and evidence-informed decision-making. This can cause confusion and hamper collaboration between public health professionals. In this presentation potential definitions, concepts and frameworks for health intelligence are presented to better understand what is meant by the term "health intelligence". These are contrasted with the concept of evidence-informed decision-making. Finally, the role of health intelligence within the evidence ecosystem is discussed.

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Victoria Elliot

Victoria Elliott is a Principal Information Analyst with the ScotPHO team at Public Health Scotland. She has an MSc in Epidemiology from the University of Edinburgh and has been working as an NHS analyst since 2004. Over the last 20 years she has worked in multiple teams supporting production a variety of public health intelligence outputs, in particular those derived from Scottish hospital admissions, deaths and prescriptions datasets.

Presentation

Introduction to the Scottish Public Health Observatory (ScotPHO) collaboration

In 2004, the Scottish Public Health Observatory (ScotPHO) collaboration was established with the aim of providing a clear picture of the health of the Scottish population and the factors that affect it. This session will introduce the ScotPHO collaboration and showcase two of our main products, the ScotPHO website and online profiles tool. Describing how these products have been created and evolved, as well as some of the challenges encountered over the years.

Nevashan Govender

Nevashan Govender is Emergency Operations Centre Manager at the National Institute for Communicable Diseases (NICD). He was previously employed as a Strategic Information Manager at Anova Health Institute, Provincial Epidemiologist, Research Manager at the NICD and Laboratory Coordinator at the National Health Laboratory Service. Nevashan holds a Master's degree in clinical microbiology and infectious diseases, a Master's degree Public Health (epidemiology and biostatistics), a postgraduate diploma in management (monitoring and evaluation) and a honours in zoology. He is a graduate of the South African Field Epidemiology (and Laboratory) Training Programme, a Certified public health emergency management specialist, WHO global expert on public health emergency operation centres, Global Outbreak Alert and Response Network focal point and rostered qualified expert for the United Nations Secretary General's Mechanism.

Presentation

Behind the Scenes of COVID-19: The NICD's Role in the National Surveillance and Response

The presentation will outline how the National Institute for Communicable Diseases (NICD) anticipated and responded to the COVID-19 pandemic in South Africa using innovative approaches. Beginning with early alerts in December 2019 through the IANPHI Network, the NICD initiated surveillance and laboratory preparedness by January 2020. It implemented comprehensive respiratory disease monitoring across all provinces, supported by syndromic sentinel surveillance (SRI and ILI), national genomic sequencing, and hospital-based surveillance via the DATCOV system. The NICD worked closely with NATJOINTS and other government departments to coordinate the national response, including field investigations, swab testing, real-time data reporting, reinfection tracking, and variant detection, notably the isolation of Omicron. The response was supported by dedicated teams including swab units, the South African COVID-19 Modelling Consortium (SACMC), and provincial incident management structures. The presentation concludes with a tribute to the courage and sacrifice of NICD and NHLS staff, who played a critical yet often unsung role in saving lives and safeguarding public health.

Dr Fiona Callaghan

Dr Fiona Callaghan is the Chief Advisor Epidemiology for the Intelligence, Surveillance and Knowledge group in Aotearoa's Public Health Agency.

Fiona graduated began her career as a researcher and lecturer at the University of Pittsburgh, before joining the US Food and Drug Administration. She then worked as a researcher at the National Institutes of Health in the US, before moving into the biotechnology industry. Fiona joined Aotearoa's COVID-19 response in 2020, stepping into her current role in July 2023.

Fiona has conducted epidemiological research in a number of areas including cancer, nutrition, and informatics, and has over 30 peer-reviewed publications.

Presentation

Infectious disease modelling at the Public Health Agency

The New Zealand Royal Commission COVID-19 Lessons Learned Phase 1 report, published in December last year, recommended that scenario planning and modelling should be used routinely to support decision making and planning for pandemic preparedness. The Public Health Agency (PHA), has developed a new tool for disease modelling to allow the health system better to prepare for outbreaks and future pandemics.

Developed with the University of Canterbury, the work is based on methods similar to those used during COVID pandemic, but is flexible enough to be used for a wide range of pathogens. By dividing the population into three groups—susceptible, infected, and recovered (SIR)—the model helps predict the progression of an infectious disease over time. The main goal of this modelling is to provide a clear picture of how a range of diseases with differing characteristics could spread, peak, and respond to some interventions. The purpose of this talk is to demonstrate the new modelling capability within the PHA and describe the plan for modelling and public health into the future.

Dr Gary Jackson

Dr Gary Jackson is a public health medicine specialist leading a small team of public health clinicians and analysts within Te Whatu Ora in the Planning, Population Health, and Outcomes directorate. He has worked in the health sector for over 30 years including internationally in public health, planning, and health intelligence leaderships roles. He has specialised in the generation, collection, and analysis of information to support evidence-based health care management. He is a member of the National Screening Advisory Committee, and the Newborn Screening Technical Advisory Group.

Presentation

Hospital service demand: a population health view

Stories appear in the news media weekly about demands on primary care and hospital systems, delays in treatment, and workforce issues. Demographic growth is a major driver of the need for healthcare. Are there any other drivers that should be taken into account when planning health care capacity? This presentation takes a population health lens to recent growth in volumes of care, and looks forward as to future service demands, and makes suggestions as to what the health system response should be.

Dr Jonathan Chua

Dr Jonathan Chua is a Principal Advisor, Ministry of Health.

With a passion for turning data into action, Jonathan brings over a decade of experience in public health across academia, consultancy, and government. His work blends behavioural science, epidemiology, and real-world insights to shape smarter, more effective health interventions.

Presentation

A Behavioural Insights approach to inform public health intervention - attitudes and behaviours

The Ministry of Health commissioned a project to monitor changes in attitudes and behaviour, and understand the drivers and barriers to following public health advice and recommendations. This involved two parts. The first is a repeated cross-sectional survey and the second uses mixed methods. In this presentation, we highlight a few broadly applicable insights and lessons from the project including addressing barriers with an emotional component, how can we strengthen the messaging, and how people make decisions different depending on the context.

Dr Anja Mizdrak

Dr Anja Mizdrak is a public health researcher who specialises in simulation modelling and quantitative analysis. Her work has covered multiple topics including alcohol, transport, physical activity, COVID-19, and nutrition. Anja is interested in the role of data and modelling in public health policy and practice, and the wider societal impacts of health behaviours and interventions, such as impacts on inequities and the environment.

Presentation

Using Google Maps data for public health research: an honest feasibility assessment

Collecting accurate data on exposure to harmful commodities is time-consuming, labour-intensive and can quickly be outdated. Capturing online information using automated processes could make data collection faster, cheaper, and easier to update. This seminar will give the honest experiences of optimistic researchers trialling the use of automated processes of collating Google Maps data for a ‘simple’ research application – collating information on alcohol outlet opening hours in Aotearoa.

Peter Himona

Peter Himona is a senior analyst in the Māori Health Insights and Monitoring team at the Ministry of Health. For the last 21 years he has specialised in monitoring and profiling Māori inequalities across all sectors, the last 16 years in health. He is a high user of quantitative data and specialises in matching data to indicators and exploring datasets to identify inequalities. A large part of his current position is providing advice across the Ministry and the health sector about Māori health. He is a key advisor to all the Ministry's Māori health chartbooks and its previous work for the Waitangi Tribunal's Health Service and Outcomes Inquiry.

Presentation

Māori data governance and sovereignty is a challenge in the health sector.

This presentation will look at Māori data Sovereignty and Governance, events leading to a data governance model for use in the public sector - designed by Māori data experts for use across the Aotearoa New Zealand public service, key insights from the model, and examples of Māori data governance in the health sector. I talk about my experiences in this area and leave you with key takeaways.

Dr Lynn Riggs

Dr Lynn Riggs began her long career as a research economist at the U.S. Centers for Disease Control and Prevention (CDC) where she conducted economic research on diverse health topics. She also led the CDC's economic evaluation training program, which helped medical professionals across the U.S. adopt economic evaluation methods. In New Zealand, she conducted economic research for a variety of different institutions. Her research interests include labour, health, education, and financial economics.

Presentation

Brief Overview of Economic Evaluation

This presentation will provide a brief overview of the methods and concepts used in economic evaluations. This will cover the different types of economic evaluations that are typically conducted in health, the main design considerations, and the general uses for these different types of evaluations.

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Dr Kristie Carter

Dr Kristie Carter is the Group Manager, Intelligence Surveillance and Knowledge in the Public Health Agency. She began her career at the University of Auckland, completing a PhD in stroke epidemiology before becoming a senior research fellow. Kristie has subsequently contributed her expertise to a number of public sector roles, including at the Department of the Prime Minister and Cabinet and Te Puni Kōkiri. In March 2024, Kristie joined the Ministry of Health as the Public Health Agency's Intelligence, Surveillance and Knowledge Group Manager, guiding the group's leadership of public and population health evidence, surveillance, and insights.

Dr James Greenwell

Dr James Greenwell is Acting Deputy Secretary, Policy & Insights, Ministry for Pacific Peoples. James has a background in epidemiology and a focus on data equity to promote greater transparency and accountability across the health system. As Acting Deputy Secretary at the Ministry for Pacific Peoples, he works with government agencies to strengthen Pacific representation in official statistics and improve the quality and cultural relevance of population data. His work also supports public health by reinforcing the data foundations used in health intelligence, surveillance, and decision-making.

Richard Hamblin

Richard Hamblin is Director of Health Quality Intelligence at the Commission, responsible for all aspects of the Commission's measurement of the quality of New Zealand's health care. This includes the New Zealand Atlas of Healthcare Variation, measurement of the effects of national quality improvement programme, and design and implementation of national indicators of quality and value. Prior to joining the Commission, Richard worked for 20 years in and around the NHS in England, including as Director of Intelligence at the Care Quality Commission. He has also worked for The King's Fund in London and is a 2006–07 Harkness Fellow.

Tim Hopley

Tim Hopley joined the Ministry of Health's Environmental and Border Health Team in August 2020 and has recently been appointed the Manager of Environmental Health for the National Team within the National Public Health Service, Health New Zealand – Te Whatu Ora.

His past experience includes working in local government and NGOs. Tim has an extensive background in environmental science and now applies this experience to environmental health concepts and principles with a focus on water quality and hazardous substances. Understanding legislation and policy and how these apply to health protection has become a key component of Tim's mahi whilst working at the NPHS. Tim has contributed to international and national guidelines for environmental health and is currently the secretary for the Public Health Observatory NZ (PHONZ). Education consists of a BSc from Lincoln University, an MSc from the University of Auckland and a PGDipPH from the University of Otago.

Dr Alex Kazemi

Dr Alex Kazemi trained in medicine in London but completed specialist training in Australasia in Emergency and Intensive Care Medicine, serving as an ICU physician at Middlemore Hospital until 2021. He is currently working as a Medical Specialist at the New Zealand Blood Service, but starts a clinical post in the Intelligence Directorate of the National Public Health Service in August. He is passionate about using and communicating data to improve health systems and health policy, as well as global humanitarian health.

Dr Nicholas (Nick) Jones

Dr Nicholas Jones is a public health physician and Medical Officer of Health working in the National Public Health Service.

Dr Jones has worked in public health for more than 30 years. In 2005, Nick completed the public health informatics training fellowship at the US Centers for Disease Control and Prevention (CDC) after which he led the science team at CDC's Environmental Health Tracking Branch.

On his return to New Zealand, Dr Jones worked as Medical Officer of Health for environmental health in Hawke's Bay and established New Zealand's first Public Health Informatics course at the University of Otago Public Health summer school. As Clinical Director, Population Health, Nick led the response to the Havelock North Campylobacter outbreak in 2016. He chaired an interagency group of scientists investigating the microbiological causes of the outbreak and provided evidence to the Government inquiry into the outbreak on behalf of the District Health Board.

Dr Jones became the New Zealand Director of Public Health at the Ministry of Health in 2022, where he worked until March 2025. Nick was awarded the New Zealand Public Service Medal in 2020.

Dr John McCarthy

Dr John McCarthy is Group Leader, Health Intelligence and Surveillance – PHF Science. John holds a PhD in population modelling and has deep expertise in leading multidisciplinary public sector teams focused on pandemic prevention, preparedness, and response.

At PHF Science, he oversees high-impact research and surveillance activities that provide timely, evidence-based intelligence to support public health decision-making in New Zealand.

Dr Maria Poynter

Dr Maria Poynter is Chief Public Health Clinical Officer for the National Public Health Service (NPHS). As an Aotearoa-NZ trained public health medicine specialist, she has a broad experience base including particular interests in systems and quality, and is passionate about communicating the benefits of a population health approach. In her current role, she provides clinical leadership across NPHS and represents public health on a variety of Te Whatu Ora-Health NZ groups and committees, including the national clinical senior leadership team.