



**Health**  
South Eastern Sydney  
Local Health District

# Public Health Unit Research Report, 2021-2022

South Eastern Sydney Local Health District

November 2022

# 1 Foreword

The Public Health Unit is responsible for monitoring, preventing and otherwise minimising public health risks in the community. These risks might be infectious diseases acquired from other people, from animate vectors, such as mosquitoes, or from sources in the built environment, legionellosis being a good example. Other risks might be caused by exposure to toxic chemicals, whether present in tobacco smoke, or a result of contamination of the air, soil or water by industrial processes.

To undertake this work, the Public Health Unit comprises a multidisciplinary professional team of registered nurses and surveillance officers, medical personnel, environmental health officers and epidemiologists, supported by able administrative staff. Staff work closely within the District with population health staff and clinicians in all hospitals and in the community, with Health Protection NSW and with other agencies to respond to and minimize public health risks.



Excellence in Aboriginal Healthcare Award for the initiative Supporting Aboriginal communities through COVID-19

All teams are committed to fitting research where possible around their core activities and have been successful in using opportunities for operational research. During 2020-2022, all teams were almost completely committed to the public health response to novel coronavirus. Despite this, teams continued to work on previous projects and research papers; and because of it, they were enthusiastic about documenting evidence and analyses of the new disease and its public health impact.

This *Research Report* showcases research published or accepted for publication or presentation over the last year, and also summarises some new projects – in infectious diseases, environmental health risks and regulation including tobacco control, and the impact of COVID-19, and we hope this work will have an impact on future public health.

## 2 Scientific publications

**MJ Ferson MJ, Flanigan S, Cains T.** Lead poisoning outbreak from consumption of contaminated Ayurvedic medication, *Medical Journal of Australia*. 2022 March, 216 (4), 212-213.

<http://dx.doi.org/10.5694/mja2.51422>

**Flanigan SA, Cains TJ, McIndoe LN, Ferson MJ.** An audit assessing regulatory compliance of businesses that perform colonic lavage, *Public Health Research & Practice*. 2022 July, Online.

<http://dx.doi.org/10.17061/phrp32232210>

**Capon A, Gonzalez N, Sheppard V.** The suitability and usability of a tool to assess contact status from COVID-19 exposures in the workplace. *Australian and New Zealand Journal of Public Health*, 2022 August, 46(4). <https://doi.org/10.1111/1753-6405.13251>

Vujovich-Dunn C, Wand H, Brotherton J.M.L, Gidding H, Sisnowski J, Lorch R, Veitch M, **Sheppard V**, et. al. Measuring school level attributable risk to support school-based HPV vaccination programs. *BMC Public Health*. 2022, 22:822. <https://doi.org/10.1186/s12889-022-13088-x>

Jayasundara D, Randall D, Sheridan S, **Sheppard V**, Liu B, Richmond PC, Blyth CC, Wood JG, Moore HC, McIntyre PB, Gidding HF. Estimating the excess burden of pertussis disease in Australia within the first year of life, that might have been prevented through timely vaccination. *International Journal of Epidemiology*. 2022, 1-10. <https://doi.org/10.1093/ije/dyac175>

Werder O, Holland K, Kiaos T, **Ferson MJ.** Between the sea and the sky: A social practice investigation into health behaviours during cruise travel. *Health Promotion Journal of Australia*. 2022;00:1–12. <http://dx.doi.org/10.1002/hpja.593>

Merritt T, Dalton C, Kakar S, **Ferson M**, Stanley P, Gilmour R. Influenza outbreaks in aged care facilities in NSW in 2017 – impact and lessons for surveillance. *Communicable Disease Intelligence* 2021; 45, Online. <https://doi.org/10.33321/cdi.2021.45.13>

**Stewart BW**, Sitas F, Currow D. Country profile: Australia, New South Wales. From validation to implementation: Progressing tobacco smoking cessation among people with cancer and beyond via relevant authorities. *Cancer Epidemiol*. 2022; 78. <https://doi.org/10.1016/j.canep.2022.102138>

Smith J, Togawa K, Dresler C, Hawari F, Zain ZM, **Stewart BW**, Warren GW, Sitas F. Smoking cessation after a cancer diagnosis: Commentary on special supplement in *Cancer Epidemiology* *Cancer Epidemiol* 2022; 79. <https://doi.org/10.1016/j.canep.2022.102210>

### **Publications in Press or Progress**

**Cains T**, Shalak H, Timms V, Jeffery R, **Kiss A**, Smith A, Sintchenko V, **Ferson MJ.** Legionellosis associated with a communal spa pool, *Communicable Disease Intelligence*. (in press)

**Capon A, Katelaris A, Sullivan E, Gonzalez N, Zhu A, Browne M, Mihajlovic M, Ferson M, Sheppard V.** The value of active follow up of a newly acquired hepatitis B infection – lessons for current approaches. *Communicable Diseases Intelligence* (in press)

**Ferson M, Johnson R, Cains T**, Cremation and the medical practitioner. (submitted)

**Trevitt B, Katelaris A, Bateman-Steel C, Chaverot S, Flanigan S, Cains T**, Martinez E, Ginn A, Sintchenko V, Jones A, Lachireddy K, **Ferson MJ, Sheppard V**. Community outbreak of *Pseudomonas aeruginosa* wound infections associated with contaminated piercing aftercare solution in Australia. (submitted)

### **3 Presentations at conferences**

**Flanigan SA**. Pseudomonas and the piercings. EHA State Conference – Newcastle August 2022.

**Houston J, Cains T**. Keeping Sydney open – Mass Gatherings with COVID. EHA State Conference - Newcastle August 2022

**Hannan T**. Cultural support during COVID-19 pandemic – the development of the Aboriginal Support Officer role in South Eastern Sydney LHD. 13th National Aboriginal and Torres Strait Island Environmental Health Conference - Darwin September 2022.

**McIndoe L, Allen A, Maude L, Sheppard V**. Investigation of low immunisation coverage in four-year-old children residing in Eastern Sydney. Communicable Diseases and Immunisation Conference, 20-22 June 2022, Sydney, Australia.

**Stiboy E, Chaverot S, SESPHEU Case & Venue Management teams, Katelaris A, Sheppard V**. Impacts of COVID-19 on Aged Care Facilities during Delta and Omicron waves. Communicable Diseases and Immunisation Conference, 20-22 June 2022, Sydney, Australia.

**Capon A, Clarke S, Dillon W, Sangadi I, Sewell K, Stagni A, Sheppard V**. Elimination of COVID-19 Omicron variant from an island community. Communicable Diseases and Immunisation Conference, 20-22 June 2022, Sydney, Australia.

**Stewart BW**. The carcinogenicity of dieldrin and related pesticides. Investigations into a possible cancer cluster on the Bellarine Peninsula, Victoria. The Senate (Community Affairs References Committee), 10 March 2022, Canberra.

### **4 Books, chapters, published reports**

**Capon A, Cains T, Ferson M and Sheppard V** - South Eastern Sydney Public Health Unit, and Draper J and Sintchenko V - NSW Pathogen Genomics, Centre for Infectious Diseases & Microbiology Laboratory Services, Westmead Hospital. Public Health Response to a Legionellosis Outbreak in Sydney CBD April - May 2022. SESLHD PHU. 27 September 2022.



Environmental Health Australia, Margaret Hind Memorial Award 2022 recipient, Toni Cains

## 5 Grants and Partnerships

NHMRC Partnership Grant: Determinants of inequity in uptake of the adolescent school-based vaccination program in high school in South Eastern Sydney Local Health District.

**McIndoe L, Sheppard V**, Guy R, Davies C, Vujovich-Dunn C, Young A, **Papa T, Kean S, Dives M, Tillman L**, Wilson E, **Ferson M**.

This study is the third project of the NHMRC Partnership Project “Identifying and addressing gaps in Australia’s adolescent HPV vaccination program” and is being conducted with researchers from the Kirby Institute. With the support of the partnership, we have been able to recruit additional schools and parents.

NHMRC Partnership Grant: Optimising public health notification systems to achieve hepatitis C elimination in Australia.

Stoové M, Hellard M, Pedrana A, Treloar C, Doyle J, Eades S, Scott N, Dore G, Davies J, Marukutira T (Chief Investigators); Combo T, Richmond J, Selvey L, Lee K, Rees T, **Sheppard V**, Wallace J, Crawford S, Davies A, Kerr S (Associate Investigators).

H2SEQ initiative: Viral Genomics for Public Health Interventions in HIV and HCV to guide national HIV and HCV elimination by:

- precise and rapid identification of emerging trends in virus spread – jurisdictionally, nationally, and in at-risk sub-populations.
- rapidly documenting emerging trends in antiviral drug resistance, including transmitted drug resistance (TDR); and iii) tracking progress in the size of the prevalent viraemic populations at jurisdictional and national levels.

HCV working group - Lloyd A, Treolar C, Maher I, Nigro S, **Chaverot S**, Gray R, Selvey L, Didlick J, Sisnowski J, Russell D, Melody S, Gilks C.

HIV working group – Quinn E, Galbiati C, Goyen J, Spokes P, **McIndoe L**, Thompson S, Chan C, Ambady Y, Katterl R, Glasow K, Lloyd C, Mainsbridge S, Rappolt J.

## 6 Research in progress

**Hannan T, Kiss A, Cains T, Ferson MJ.** Control of the sale of vapes in tobacco retailers near Aboriginal communities in South Eastern Sydney Local Health District.

The South Eastern Sydney Public Health Unit Tobacco Control Officer was advised in 2021 that Aboriginal minors were easily accessing and purchasing vapes. A project was initiated to identify local high schools near Aboriginal communities and undertake compliance assessment of tobacco retailers to identify sales of liquid nicotine containing vapes. The project identified a number of retailers who were operating in breach of the law and accordingly 24 seizures of vapes containing nicotine were undertaken over a 9 month period, interrupting the ready access of minors to these illegal products.

**Parashko T, Smith S, Sheppard V.** Needs and Assets Assessment for mothers living with Hepatitis B in South Eastern Sydney Local Health District.

This research project aims to undertake a needs and assets assessment for mothers living with HBV in SESLHD to inform future priorities with this population.

**Limbach R, Cains T, Ferson M, et al.** First urban acquisition of human leptospirosis in south-eastern Sydney

In 2022 the Public Health Unit was notified of a case of leptospirosis (a zoonotic disease most commonly acquired by exposure to the urine of infected rodents) in a local resident which as far as we know is the first urban acquired case in NSW in the past 30 years. This case and the investigation of a possible source are placed in context by a review of the literature on the possible impact of climate change and increased rainfall on the incidence of human leptospirosis and a review of published literature on human leptospirosis in urban settings in industrialised countries.

**Stiboy E, Chaverot S, SESPHU Case & Venue Management teams, Katelaris A, Sheppard V.**

Impacts of COVID-19 on Aged Care Facilities during Delta and Omicron waves.

The frail elderly are one of the most vulnerable populations for severe COVID-19 and death. Residential aged care facilities (RACF) provide an ideal environment for the spread of respiratory diseases, with a high infection-fatality ratio. We compare RACF COVID-19 outbreaks in South Eastern Sydney Local Health District (SESLHD) during the Delta and Omicron waves.

**Stewart BW, Fritschi L.** Evaluation of a published review on cancer from pesticides.

A recent review is unique in concluding that pesticides probably cause colorectal cancer and acute myeloid leukaemia. The publication, titled 'Exposures to pesticides and risk of cancer: Evaluation of recent epidemiological evidence in humans and paths forward', is cause for concern. The subject addressed involves all pesticides, rather than a single pesticide, or chemical class of pesticides. The search terms seem likely to have missed many studies, including those with titles involving 'insecticides' and 'herbicides'. For these and other reasons, a 'Letter to the Editor' is being prepared.

**Stewart BW.** Cancer in the community caused by consumer products.

An evaluation is being made of the evidence that consumer products, used in accordance with the manufacturer’s instructions, may result in consumers being exposed to an increased risk of cancer. Tobacco and alcohol-related products are excluded from consideration in this context. There is scant evidence of an increased risk of cancer attributable to the use of a particular category of consumer products, with personal care products, including hair dyes, being most studied. However, there is concern in the community about potential exposure to known or likely carcinogens as a result of using a wide range of products from paint to food.



Keeping People Healthy award for the initiative “Regulating e-cigarettes in the LHD”