2025 Infection Newsletter - Q1

Welcome

Welcome to our first newsletter of 2025!

It's been a while since our last update, and we're excited to share the most thrilling news and updates from 2024.

Get ready to dive into our latest highlights!

Save the Date

You are invited to the next Infection Research Program Meeting on

Friday, 27 March at 4 PM at Caves, Lecture Theatre, HMRI.

This time the Infection Prevention & Control Theme will present.

You will also hear from **Professor Brett Neilan**, our newest Program Affiliate, who will introduce his research on mosquitos and fruit bats.

Completion of the PREVENT Study

The **P**andemic **Re**spiratory **V**irus Surv**e**illa**n**ce **T**rial is a feasibility study investigating which respiratory viruses are circulationg in the Newcastle and Lake Maquarie LGA over a full seasonal cycle. 52 FluTracking participants were invited to complete weekly nasal swabs, which underwent PCR testing for the most common respiratory viruses.

The biggest hurdles we anticipated prior to study commencement were firsty, that it would be difficult to find volunteers willing to complete weekly swabs for a full year and, secondly, that samples mailed to us in express envolopes may be of poor quality due to temperature exposure and/or delayed processing, and not suitable for PCR testing.

To our surprise:

- Particant recruitment was completed withing 4 hours
- Most envelopes arrived within 1-2 days after sample collection and all tested samples were of good quality
- Only a small proportion of envelopes was delivered with a significant delay and those samples were discarded.
- 47 of the initial 52 participants completed the study. Only 5 participants dropped out about half-way through the study after the Christmas break

Our key findings were:

- Rhinovirus (the virus associated with the common cold) was the leading cause of virual infection

- 85% of participants who had COVID-19 were symptomatic
- 30% of participants with rhinovirus or bocavirus were symptomatic

The most common viral infections observed between June 2023 - June 2024 were:

1. The common cold - rhinovirus: 50%
2. COVID-19 - SARS COV2: 21%
3. Seasonal coronavirus (not COVID-19): 7.1%
4. Respiratory synctical virus (RSV): 6.3%
5. Bocavirus: 4.7%

The article What viruses made us sick in 2024[1] describes key findings and study highlights of PREVENT.

For further information about FluTracking or to join, click here[2].

Human Metapneumovirus (HMPV) is on the rise

What is it?

And what does it mean for you?

Dr Jason Girkin summarises everything that you need to know about HMPV on the HMRI Website[3].

Most importantly:

- **HMPV Is Not a New Threat** – Unlike COVID-19, **HMPV is a known seasonal virus** that has been around for decades, with most people exposed by age five.
- **It is Seasonal, Not Pandemic-Level** – Recent case increases **follow normal cold/flu season patterns**, not a global outbreak like COVID-19.
- **No Need to Panic** – The community already has **some immunity**, and HMPV poses the most risk to vulnerable groups, similar to other respiratory viruses.

Check also out his Reel on **Instagram**[4] or Facebook[5]!

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[1] https://hmri.org.au/news-and-stories/what-viruses-made-us-sick-in-2024/
[2] https://www.flutracking.net/Join/AU
[3] https://hmri.org.au/news-and-stories/human-metapneumovirus-hmpv-is-on-the-rise-what-is-it-and-what-does-it-mean-for-you/

Our Highlights of the 2024 ACICP Conference

1 - Prof Brett Mitchell AM, Infection Research Program Deputy Lead

Prof Brett Mitchell AM delivered the ACIPC Lecture titled **"An Antidote to Infection Control Confusion"** at this year's conference of the Australasion College for Infection and Prevention Control (ACIPC). His inspiring presentation highlights the need for more Infection Prevention and Control (IPC) research, especially randomised controlled trials, and called on clinical, academic, policy, and industry sectors to unite in fostering high-quality IPC research.

See ACIPC's LinkedIn post **here**[6].

2 - Bismi Thottiyil Sultanmuhammed Abdul Khadar

Bismi Khadar, recipient of our program's 2024 EMCR Research Support Funds, presented her findings at the 2024 ACIPC conference.

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[4] https://www.instagram.com/reel/DFV-rSMNF8a/?utm_source=ig_web_copy_link
[5] https://www.facebook.com/watch/?v=1105773161330057&rdid=TigKRUQuSn2RzcM5
[6] https://www.linkedin.com/posts/acipc-ltd-ba300b1b2_acipc2024-meetingsinmelbourne-visitmelbourne-activity-7264505710644797441-Tpxt/

"This event provided me with an invaluable opportunity to connect with numerous IPC professionals in the field, both Nationally and Internationally. Moreover, this was a great opportunity for me to present my research findings on an international stage, followed by its publication in JAMA Network Open. I am pleased to share the link to our recent publication: Air Purifiers and Acute Respiratory Infections in Residential Aged Care: A Randomized Clinical Trial[7].

I am so proud to be a recipient of EMCR support funds and extremely grateful to the HMRI Infection Research team for this generous funding, which significantly supported my attendance at this event."

Infection Control Matters - The Podcast

In this episode recorded at the 2024 Australasian College of Infection Prevention and Control (ACIPC) Conference in Melbourne, Brett and Phil talk to Dr Sarah Browning (ID Physician at Hunter New England) and two Junior Medical Officers (JMOs) Sam and Lochlan who worked on IPC-related projects whilst on placement. You can listen to it here[8].

[7] https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2825943
[8] https://infectioncontrolmatters.podbean.com/e/engaging-junior-doctors-in-ipc/

Recent Publications

3 - Recent publications by our program affiliates

Kristensen NK, Manning L, Lange J, Davis JS. **External Validation of the Joint-Specific Bone Involvement, Antimicrobial Options, Coverage of the Soft Tissues, and Host Status (JS-BACH) Classification for Predicting Outcome in Periprosthetic Joint Infections: A Cohort of 653 Patients.** J Arthroplasty. 2024 Sep;39(9):2352-2356.e2. doi: 10.1016/j.arth.2024.03.070. Epub 2024 Apr 9. PMID: 38599531. Click here to read more.[9]

Browning S, White NM, Raby E, Davis JS, Mitchell BG. **Which trial do we need? Gown and glove use versus standard precautions for patients colonized or infected with methicillin-resistant Staphylococcus aureus or vancomycin-resistant Enterococcus.** Clin Microbiol Infect. 2024 Aug;30(8):973-976. doi: 10.1016/j.cmi.2024.05.009. Epub 2024 May 15. PMID: 38759870. Click here to read more[10].

BALANCE Investigators, for the Canadian Critical Care Trials Group, the Association of Medical Microbiology and Infectious Disease Canada Clinical Research Network, the Australian and New Zealand Intensive Care Society Clinical Trials Group, and the Australasian Society for Infectious Diseases Clinical Research Network; Daneman N et al. **Antibiotic Treatment for 7 versus 14 Days in Patients with Bloodstream Infections.** N Engl J Med. 2024 Nov 20. doi: 10.1056/NEJMoa2404991. Epub ahead of print. PMID: 39565030. Click here to read more.[11]

[9] https://www.sciencedirect.com/science/article/pii/S0883540324003140?via%3Dihub
[10] https://www.sciencedirect.com/science/article/abs/pii/S1198743X2400243X?via%3Dihub
[11] https://www.nejm.org/doi/10.1056/NEJMoa2404991?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub_0pubmed

Dulhunty JM, Brett SJ, De Waele JJ, Rajbhandari D, Billot L, Cotta MO, Davis JS, Finfer S, Hammond NE, Knowles S, Liu X, McGuinness S, Mysore J, Paterson DL, Peake S, Rhodes A, Roberts JA, Roger C, Shirwadkar C, Starr T, Taylor C, Myburgh JA, Lipman J; BLING III Study Investigators. **Continuous vs Intermittent β-Lactam Antibiotic Infusions in Critically Ill Patients With Sepsis: The BLING III Randomized Clinical Trial.** JAMA. 2024 Aug 27;332(8):629-637. doi: 10.1001/jama.2024.9779. PMID: 38864155; PMCID: PMC11170452. Click here to read more.[12]

Contact

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[12] https://jamanetwork.com/journals/jama/fullarticle/2819971
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