

Equally well

Vaccination – achieving equity of access

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Vaccine preventable hospitalisations

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- ▶ Systematic review, Dr Michael Lau
- ▶ Studies of vaccination and mental health conditions (1980-2020)
 1. Vaccination rates
 2. Prevalence of vaccine-preventable conditions
 3. Barriers and strategies
- ▶ Findings from 23 studies
 1. Most focus on Hepatitis B
 2. Reduced vaccination rates
 3. Increased illness: influenza, pneumococcal pneumonia and herpes zoster
 4. Increased hospitalisation rates: influenza, pneumococcal pneumonia
 5. Barriers include service and system design, appropriateness, stigma
 6. Integrated care models improve vaccination rates

Potentially preventable hospitalisations (PPH)

Hospitalisations for conditions (diagnoses) where a high proportion could be prevented by earlier primary or specialist community care. Sometimes also called “Ambulatory Care Sensitive Conditions”.



Acute

Urinary infection, perforated ulcer, cellulitis, pelvic inflammatory disease, ENT infections, dental conditions, convulsions, pneumonia (non vaccine-preventable), eclampsia, gangrene

Chronic

Asthma, heart failure, pulmonary oedema, COPD, bronchiectasis, angina, iron deficiency anemia, hypertension, nutritional deficiency, rheumatic heart disease

Vaccine preventable

Pneumonia (Strep, Haemophilus)
Influenza, Hepatitis B, viral enteritis, measles, pertussis, diphtheria, polio, varicella etc.

** Definition hasn't yet been updated to include COVID-19*

National definition

3 categories

22 condition groups

People using MH services have greatly increased PPH



Health

Mental health service users had

- **2.6x** greater chance of having at least one PPH
- **20%** more PPHs per person
- **39%** longer stay when admitted

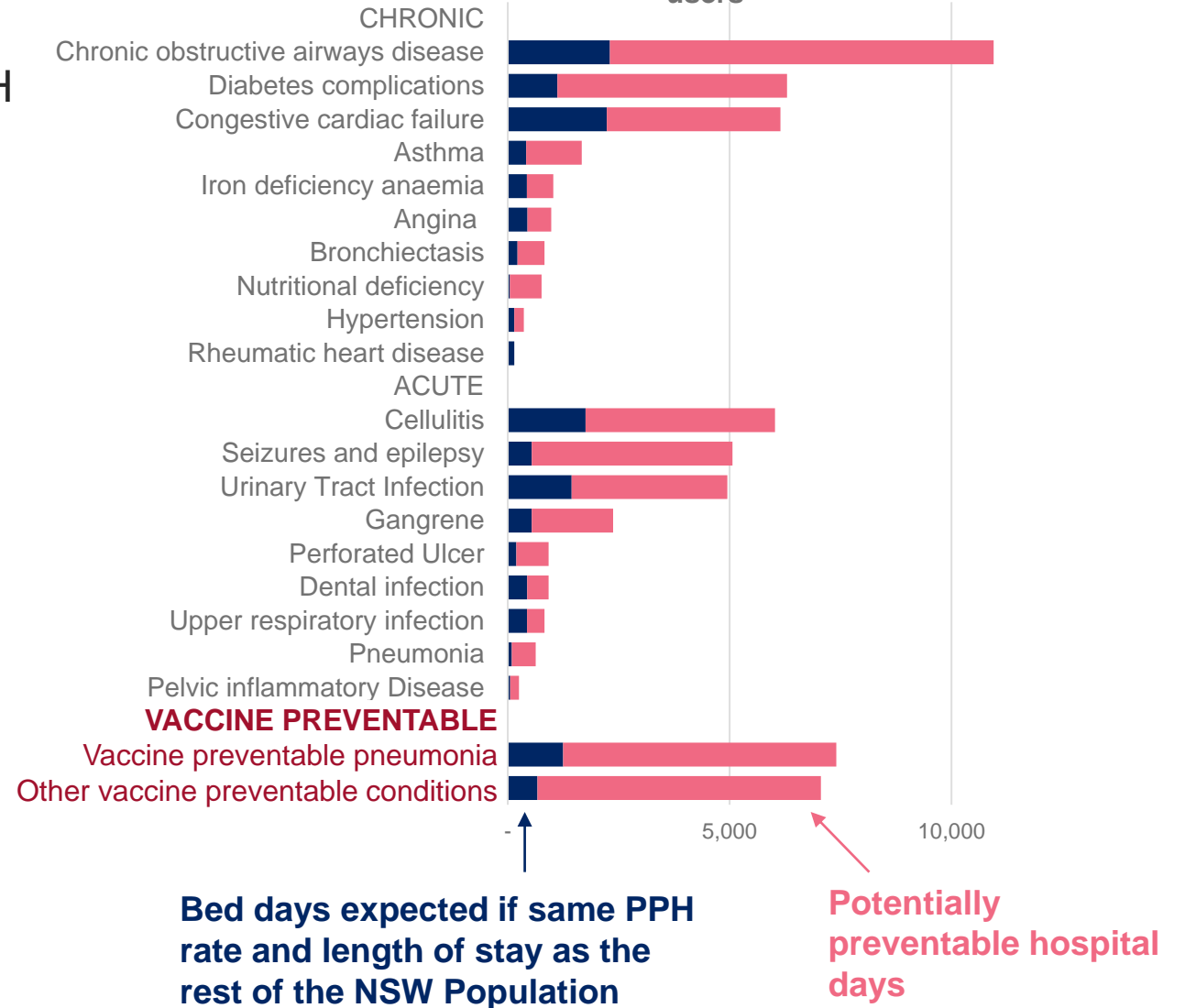
Combined effect

- **5.2x** more bed days per person
- After adjusting for age, sex and disadvantage*

Largest increases were for

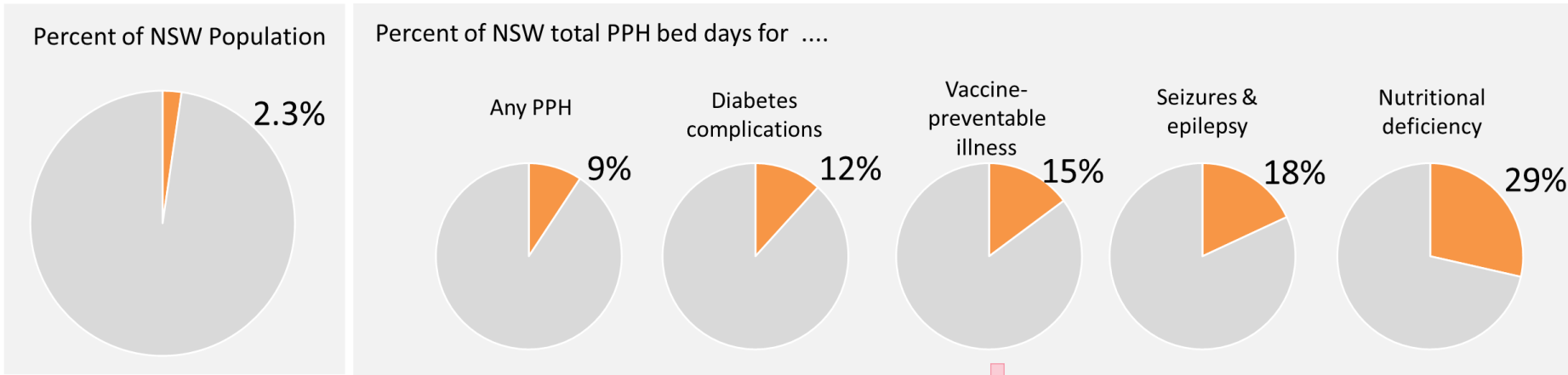
- Heart, metabolic and lung conditions
- Infections
- Seizures and epilepsy
- **Vaccine-related conditions**

Potentially preventable hospital days in NSW MH service users



This has major personal and health system impacts

NSW community mental health service users



Vaccine preventable hospital admissions : adjusted Incidence Rate Ratio (aIRR) of MH service users compared to other residents

	aIRR (95% CI)
Overall	4.5 (4.3-4.8)
Hep B	6.3 (5.9-6.8)
Influenza	3.1 (2.7-3.4)
Pneumonia	4.2 (3.6-4.9)
Other vaccine preventable	2.6 (1.7-3.4)

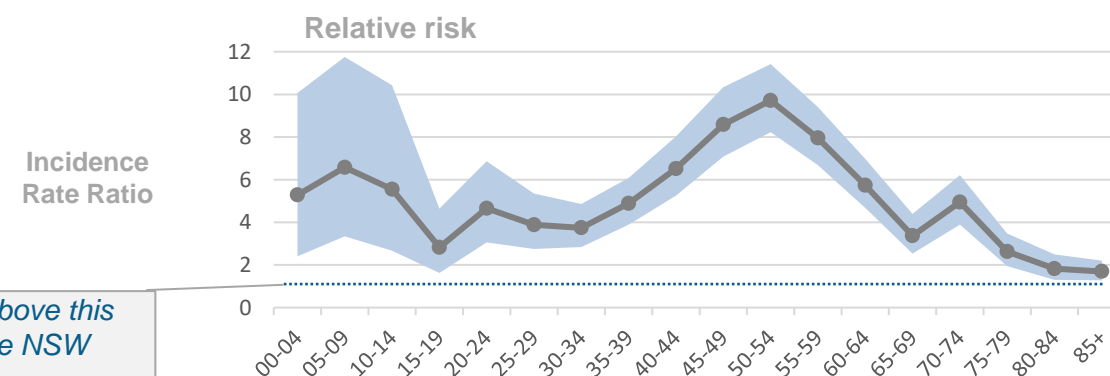
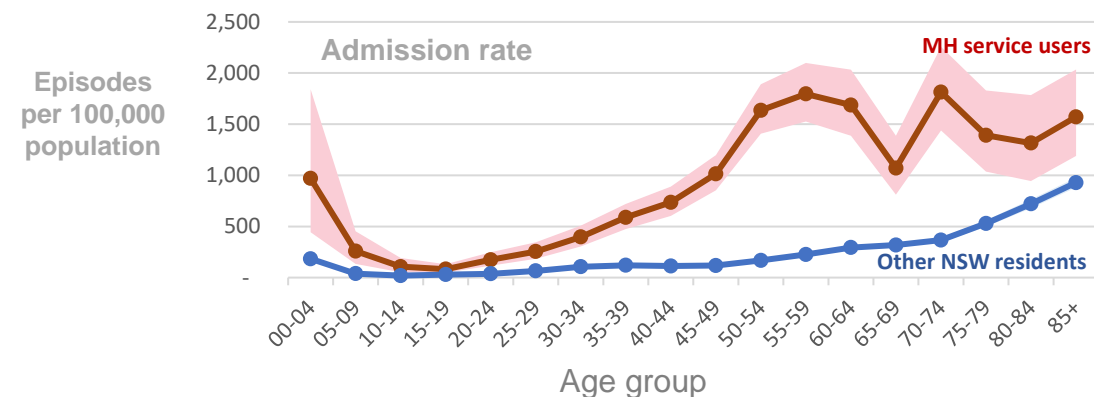
Mental health service users had 3-4x increased risk of admission for **vaccine-preventable respiratory infections**

Vaccine-preventable admissions are up across the lifespan

For people using MH services, the risk of vaccine preventable hospitalisation

- Was present **across the lifespan**
- Was **highest from age 50**
- **Increased at a younger age** than in other NSW residents.

Vaccine preventable admissions



Relative risk (IRR) of 1: Numbers above this line represent a greater risk than the NSW population

▶ Understanding impacts of COVID-19

- ▶ Data foundations for the next stages
- ▶ Safe data sharing and linkage
- ▶ Immediate : vaccination and illness rates
- ▶ Longer term : booster access and uptake, “waning”, widening gaps ?

▶ Building awareness and encourage action

- ▶ Build vaccine-related measures (vaccination rates, PPH) into regular data
- ▶ Include in measures of health system accountability and performance (KPIs)
- ▶ Ensure regular reporting to those who can make change
- ▶ Make needs of MH consumers and services visible in health system reform discussions

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Study is open access at :

Epidemiology and Psychiatric Sciences 30, e22, 1–10. <https://doi.org/10.1017/S204579602100007X>