A 10-year Quality Audit of a Nurse-Led Immunisation Program in a Metropolitan Dialysis Unit

Jacqui Moustakas

Renal NP – Royal Prince Alfred Hospital (RPAH)
Sydney

And Dr Erin Vaughan – Nephrologist (RPAH)

Why Vaccination Matters in Haemodialysis

- Impaired immune function
- High burden of comorbidities
- Repeated healthcare exposure
- Increased risk of severe vaccine-preventable infections

Vaccinations Recommended in Dialysis Population

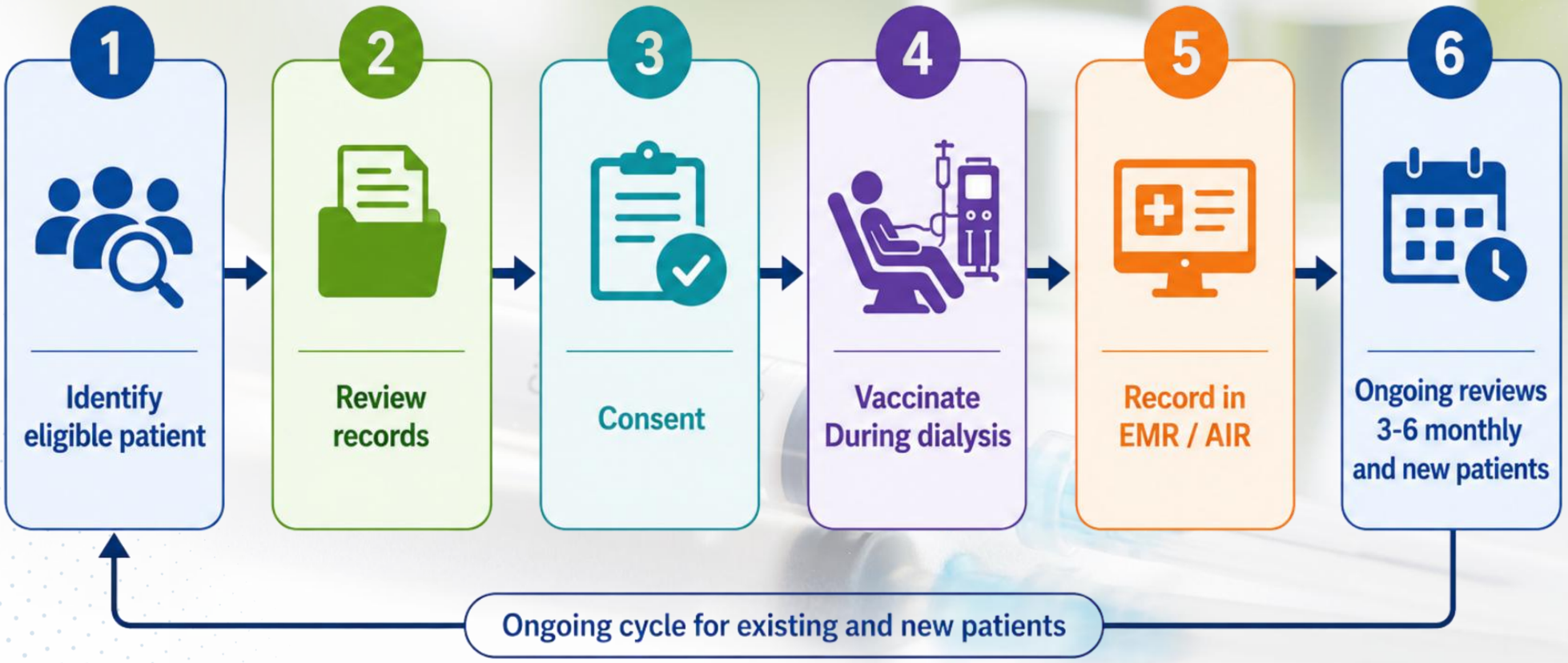
Vaccine	Recommended – Dialysis Pts	Funded – Dialysis Pts	Cost – Vial Vaccine alone
Hepatitis B	Yes	Yes	~$35
Influenza	Yes	Yes	~$15
COVID-19	Yes	Yes	~$20
Shingrix	Yes	Yes – since 2024	$300
Pneumococcal	Yes	Yes – new dosing regime from 1st July 2026	~$80 to $150
RSV	Yes	Arexy Vaccine for >75yo	~$300

- Australian Immunisation Handbook recommended patients Immunocompromised (weakened immune system) – Dialysis Patients (https://immunisationhandbook.health.gov.au/)
- https://www.health.gov.au/sites/default/files/2026-05/national-immunisation-program-schedule.pdf)

Why Deliver Vaccines in Dialysis?

- **Barriers to Vaccination:**
  - –Fragmented Care
  - –Additional GP / community appointments
  - –Transport Challenges
  - –Missed Opportunities
- **Advantages of dialysis – based delivery**
  - –Patients attend multiple times each week
  - –Established nurse-patient relationships
  - –Opportunity to deliver vaccination during treatment

Our Nurse-Led Model



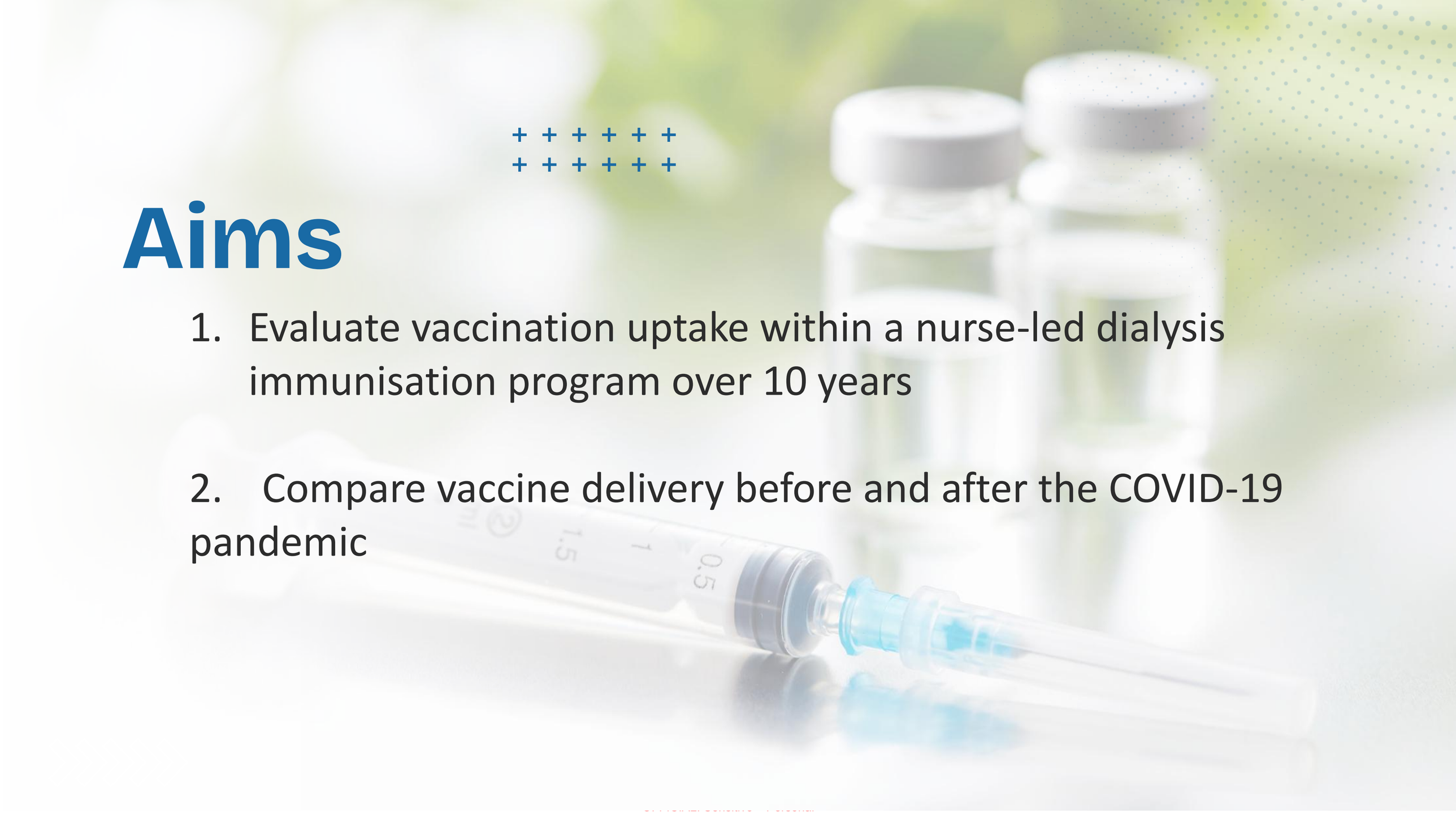
Building a Sustainable Program: 2007-2024

Year	Milestone
2007	Hepatitis B program expanded to CKD patients
2015	Influenza vaccination embedded in dialysis care
2017-18	NP prescribing and immunisation credentials established
2021	COVID-19 vaccination program implemented
2024	Shingrix program introduced

Aims

1. Evaluate vaccination uptake within a nurse-led dialysis immunisation program over 10 years

2. Compare vaccine delivery before and after the COVID-19 pandemic



Methods

DESIGN

Retrospective Quality Audit

SETTING

- 35-chair metropolitan satellite haemodialysis unit
- ~70 patients >65 years

AUDIT PERIOD

- 2015–2024 (10 years)
- Pre-COVID and post-COVID comparison

VACCINES EVALUATED

- Influenza
- Hepatitis B
- COVID-19
- Herpes Zoster (Shingrix)

DATA COLLECTION & ANALYSIS

- Vaccination data extracted from electronic medical records
- Reported descriptively as proportions and percentages

1 2 3 4 5

Results: Vaccine Uptake Across the Program

Vaccine	Uptake
Influenza	90-95%
Hepatitis B	95%
COVID-19	60-93%
Shingrix	80%

Influenza and Hepatitis B: Sustained Success



INFLUENZA

- Uptake increased from approximately **50%** before in-unit delivery to **90–95%**
- Majority now administered **during dialysis**
- Improved accessibility and convenience



HEPATITIS B

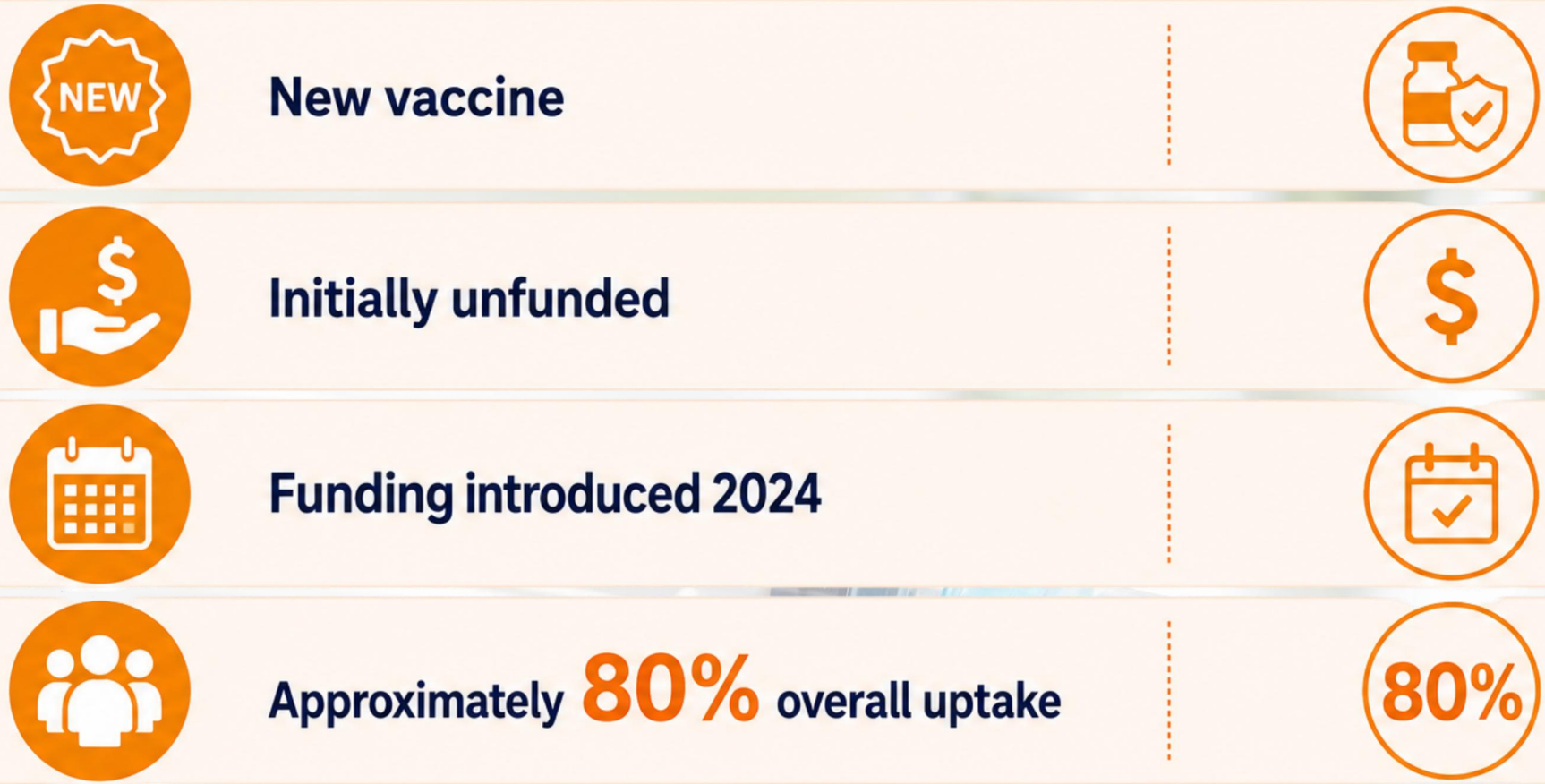
- Longstanding vaccination program
- Database enabled identification of **non-responders**
- **95%** vaccination coverage achieved

COVID-19: The Real Test of the Model

PHASE		UPTAKE
	**2021** **Unit-delivered** Vaccination delivered in-unit during dialysis	93%
	**2023–24** **Community-based** Vaccination delivered in the community	~30%
	**2025 onward** **Unit-delivered** Return to in-unit delivery during dialysis	~60%

Shingrix: Introducing a New Vaccine

- New vaccine
- Initially unfunded
- Funding introduced 2024
- Approximately **80%** overall uptake



Conclusion

- A nurse-led dialysis immunisation program achieved sustained high vaccination uptake over 10 years.
- Vaccination delivery remained effective before and after COVID-19.
- COVID provided a unique opportunity to observe the impact of different vaccine delivery models.
- Vaccines delivered within the dialysis unit achieved higher uptake than vaccines requiring external appointments.
- Core elements of this model are transferable to other dialysis units.

Future Plans

Continue current vaccinations

Add RSV and Pneumovax

Still doing on paper charts - eMeds directly into AIR

Dialysis units are NOT just places for treatment – they are powerful platforms for prevention

Thank You

To MANY people

- BIGGEST thank you to all the nurses on the floor
- CKD CNC who provide Hep B vaccinations for pre dialysis
- Renal CNC who provide / coordinate incentre patients Flu / Hep B
- RN HHD – Airisse – now starting to input into AIR
- ATs present and past
- ALL the Nephrologists over the years – “we don’t have to worry we know you will get it done”
- RN HHD - Tina - for helping put this presentation together