National Allergy Centre of Excellence

NACE PhD Project Brief

ADAPT Connect: Developing and Evaluating a Nurse-Led Model of Care within the NACE ADAPT Program

1. Project Overview

Project title	Developing and Evaluating a Nurse Led Model of Care within the NACE ADAPT Program
Linked NACE project / pillar	ADAPT OIT Program (Pillar 1, Transforming Allergy Care)
Host institution	The University of Melbourne #
Proposed start date	Q1 2027
Proposed duration	3 years, full time *Scholarship available for 3 years maximum

All candidates need to complete a minimum amount of study at the University (unless at an **approved outside institution)**: 12 months equivalent full-time student load (EFTSL) for a doctoral degree

2. Supervisor Team

Role	Name & title	Institution & department
Primary Supervisor	Dr Melanie Lloyd	Population Allergy & Allergy Immunology, Murdoch Children's Research Institute I Department of Paediatrics, University of Melbourne
Co-Supervisor 1	Professor Kirsten Perrett	Population Allergy & Allergy Immunology, Murdoch Children's Research Institute I Department of Paediatrics, University of Melbourne
Co-Supervisor 2	TBC	TBC

3. Plain language summary

The ADAPT oral immunotherapy program offered by 10 public paediatric allergy services throughout Australia offers a new treatment option for infants with peanut allergy. Families may need several appointments for assessment, oral food challenge, commencing treatment and follow-up. As the program expands, services need practical ways to provide safe, timely and equitable family-centered care while supporting efficient use of specialist allergy resources. This PhD will engage with parents and carers, nurses, allergy clinicians and

health services to identify where a nurse-led model of care could have the biggest impact within the ADAPT program. The model identified will be designed with these groups and tested at an ADAPT service level as a pilot to understand whether it is practical, acceptable, safe and affordable, and what would be needed to use it more widely.

4. Key Research Gap

The NACE-led ADAPT program has established a nationally standardised public-hospital model for infant peanut oral immunotherapy (OIT). ADAPT is currently run out of tertiary paediatric hospitals, with services delivered under the supervision of FRACP registered Allergy specialists. This model was appropriate while safety was established in the early phases of the program, however, these tertiary centres have been overwhelmed with referrals, and multidisciplinary models of care are now needed to meet demand.

As ADAPT expands including other age groups and allergens, participating services require evidence about how nursing capability can be optimally integrated into the model to support timely, equitable and sustainable care. There is currently limited evidence describing the scope of nursing practice in allergy care, the components of the ADAPT pathway best suited to nurse-led delivery, and the organisational, governance and training conditions required for implementation at scale.

Emerging ADAPT data also suggest that a substantial proportion of infants completing threshold oral food challenge have a negative challenge and can be delabelled early. This may represent an opportunity to optimise diagnostic confirmation, family support and specialist capacity. However, the relevant service need, model components and safety requirements should be identified through formative research rather than assumed in advance. A nurse-led model must operate within clearly defined clinical governance, escalation and medical decision-making arrangements.

The Department of Health, Disability and Ageing National Nursing Workforce Strategy (2026) identifies enabling nursing innovation as a national priority, including the implementation of nurse-led innovative models of care and enabling nurses to work at their optimum scope of practice.

5. PhD project summary

This PhD will develop and evaluate a nurse-led model of care within the NACE ADAPT program. The overarching aim is to identify where nurse-led care can add the greatest value within the ADAPT pathway and to determine whether a nurse-led model is feasible, acceptable, appropriate, safe and economically viable. The project will use a mixed-methods, consumer-informed implementation science approach across four interrelated components.

The project will not pre-define a service gap or nurse-led model of care. The Exploration,

Preparation, Implementation and Sustainment (EPIS) framework will provide the overarching process framework for the research program, and identify and evaluate the priority opportunities for nurse-led care within the ADAPT pathway. This staged approach ensures that the specific intervention target emerges from evidence, consumer and interest holder priorities, and local service context before committing to a pilot implementation.

Project 1: Scoping review of nursing scope of practice and nurse-led models of care
A scoping review will map the current scope of practice, roles, competencies, governance arrangements and outcomes associated with nurses working in allergy care. It will also examine relevant nurse-led models in comparable paediatric chronic disease and outpatient settings. The review will identify components of nurse-led models-of-care that may be applicable to ADAPT, alongside key implementation requirements and evidence gaps to inform subsequent project phases.

Project 2: ADAPT pathway and implementation needs assessment
This project will identify priority opportunities for nurse-led care within ADAPT. It will include mapping of the current care pathway and analysis of available ADAPT registry and service data, where feasible, to describe referral, assessment, threshold oral food challenge, OIT commencement and pathway-completion patterns. Qualitative interviews and/or focus groups with parents and carers, nurses, allergists, service managers, referrers and consumer representatives will explore experiences, unmet needs, barriers, enablers and equity considerations. The Consolidated Framework for Implementation Research (CFIR) will guide systematic assessment of contextual barriers and enablers, and Implementation Mapping will translate findings into a co-designed intervention and implementation strategy.

Project 3: Design of a nurse-led ADAPT model of care
Findings from Projects 1 and 2 will be used to develop a nurse-led model through Implementation Mapping translating findings into implementation strategy (Fernandez et al. 2019). Possible components may include protocolised referral review and triaging, family education, pre-appointment preparation, care coordination, post-oral food challenge support, telehealth-enabled navigation, connecting with community supports, and clearly defined escalation pathways. The work will produce a programme logic model, nurse role and competency framework, training package, workflow, governance and escalation requirements, and implementation strategy. The intervention will be described using an appropriate Implementation Science framework to be determined following identification of the target nurse-led model.

Project 4: Pilot implementation and health-economic evaluation

The model will be assessed in a mixed-methods hybrid type II effectiveness-implementation pre/post pilot at one established ADAPT site, with potential extension to a second site if feasible. Implementation outcomes will include acceptability, appropriateness, feasibility, adoption, fidelity, reach, equity implications, sustainability readiness and safety. Exploratory patient and service outcomes may include time from referral to assessment or threshold oral food challenge, pathway completion, parent/carer experience, clinician workload, wait-list measures and resource use. An early health technology assessment will estimate the resources and costs required for implementation and delivery, alongside patient, workforce and service outcomes. Findings will inform a future multi-site effectiveness and cost-effectiveness evaluation.

Together, these studies will provide evidence to guide a targeted, scalable, consumer-centered and clinically governed nurse-led model of care within ADAPT. The staged approach ensures that the specific intervention target emerges from evidence, consumer and interest holder priorities, and local service context to maximise use of resources for development and evaluation of a pilot intervention. The work will align with national priorities to strengthen nursing capability and innovation, while supporting future expansion of the ADAPT program.

The PhD will deliver: (1) an evidence map of nursing scope of practice and nurse-led allergy care models; (2) an interest holder-informed understanding of priority needs and implementation determinants within ADAPT; (3) a co-designed, implementation-ready nurse-led ADAPT model with defined training, governance and escalation requirements; and (4) pilot evidence on implementation and preliminary service, patient and workforce outcomes. These outputs will support NACE and participating health services to make evidence-informed decisions about sustainable workforce models and future scale-up whilst responding directly to the National Nursing Workforce Strategy priorities by examining how nursing capability can be optimally and safely integrated within the ADAPT program.

6. Proposed timeline

Year 1	Scoping review; ADAPT pathway mapping; ethics and governance approvals; registry/service-data planning; interest holder interviews and needs assessment.
Year 2	Co-design and Implementation Mapping, intervention specification; development of training, governance and implementation materials; pilot preparation.
Year 3	Pilot delivery; process evaluation; health-economic analysis; integration of findings; manuscripts and thesis writing.

7. Contact

PhD project-specific enquiries	Melanie.Lloyd@mcri.edu.au
NACE PhD application process general enquiries	nace@mcri.edu.au

8. References:

Department of Health, Disability and Aging (2026). *National Nursing Workforce Strategy.* https://www.health.gov.au/sites/default/files/2026-10/national-nursing-workforce-strategy.pdf

Fernandez, M.E., ten Hoor, G. A., van Lieshout, S., Rodriguez, S. A., Beidas, R.S., Parcel, G., Ruiter, R. A. C., Markham, C. M., & Kok, G. (2019). Implementation Mapping: Using Intervention Mapping to Develop Implementation Strategies. *Frontiers in Public Health, 7* (158). doi: https://10.3389/fpubh.2019.00158