

# Ethnic differences in the uptake of child healthcare services in Aotearoa

Professor Gail Pacheco

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**NEW ZEALAND  
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# Context

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- Part of larger team of researchers using both quantitative and qualitative methods
- Funded primarily by Health Research Council (19/263), the Children and Families Research Fund, MSD, and Te Hiringa Hauora/Health Promotion Agency
- Focus on three forms of healthcare service uptake – immunisation, GP services, dental checks
- **Plan for today:**
  - Key findings from the quantitative work (Gail)
  - Results from the qualitative work (Nadia)
  - Policy and practice implications (Gail & Nadia)

# Motivation

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- Current policy indicates there should be equitable access by ethnicity (in terms of direct costs)
  - Free doctor visits up to age 14
  - Free National Immunisation Schedule vaccines
  - Free dental case until Year 8 of school
- Ethnic gaps, particularly for Māori and Pacific Peoples persist
- Underutilisation of preventive services
  - >>> future health risks
  - >>> adverse health outcomes in the long-run

# Quantitative Phase

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# A decomposition analysis

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- **Authors:** Terryann Clark, Kabir Dasgupta, Sonia Lewycka, Gail Pacheco & Alexander Plum
- **Acknowledgements:** children and families who are part of the Growing Up in NZ study
- **Research aims:**
  - Examine ethnic differences in life-course trajectories in use & experience of healthcare services in early childhood years
  - Quantify contribution of relevant factors

# Data

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- **Growing Up in NZ** – birth cohort study – information on more than 6,000 NZ children and their families
- Survey documents child and family information on health, family life, education, neighbourhood and environment, and culture & identity
- We used four data waves:
  - DCW0: antenatal
  - DCW1: 9months
  - DCW2: 2 years old
  - DCW4: 4 years old

# Outcomes of interest

Selected Variables	NZ European	Māori	Pacific Peoples
Antenatal intention to fully immunise	0.75	0.82	0.94
All first year immunisations on time	0.71	0.54	0.65
Received 15-month immunisations	0.93	0.92	0.97
Dental visit age 2	0.39	0.33	0.39
Dental visit age 4	0.90	0.79	0.75
Choice of LMC	0.91	0.88	0.84
Seen GP or health professional since pregnant	0.71	0.67	0.77
Satisfied with usual GP practice (age 9 months)	0.68	0.62	0.74
~ N	~6,171	~ 924	~ 974

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# Explanatory Data

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- **Mother & child:** first child; mother's age; mother's weight; disability status; smoking status
- **Socio-economic:** Employment status; educational attainment; household income categories
- **Household:** Partner; NZ born; household size
- **Mobility:** Transport availability; number of residential moves; rural/urban
- **Other social aspects:** discriminated against; discouraged to immunise; encourages to immunise

# Decomposition analysis

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- Evaluate the contribution of the different covariates in explaining observed ethnic differences in use and experience of healthcare services
- Fairlie decomposition applied
- Comparison group = NZ European
- Explained & unexplained

# Results & Discussion

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- For several individual and household predictors of healthcare uptake, the association is time-variant
  - For example, socio-economic status is highly relevant for timely imms in 1<sup>st</sup> year, but insignificant at 15month and 4 year imms
- 2/3 of the NZ European-Māori gap in timely immunisation in first year was associated with household characteristics, such as single parent household; size of household
- Access to transport, and less frequent residential movement linked with a number of healthcare uptake outcomes
- Employment, education, income often contributed to ethnic gaps in GP satisfaction (signals lack of choice potentially)

# Results & Discussion

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- Social factors play a key role
  - For example, largest contributor to the NZ European-Māori difference in GP satisfaction at 9 months
  - Discouragement; Encouragement
- Perceived ethnically motivated discrimination by a health professional >>> lower likelihood of achieving first choice LMC, and reduces satisfaction level with GP
- Some ethnic gaps remained unexplained – why Pacific mothers less likely to achieve first choice LMC; and differential uptake in dental visits at 2 and 4 years old.

# State dependence analysis

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- **Authors:** Kabir Dasgupta, Gail Pacheco & Alexander Plum
- **Research aim:**
  - Does immunizing at a prior schedule influence likelihood of vaccinating at a following schedule? And to what extent?
- **Immunisation data:**
  - 6 weeks, 3 months, 5 months, 15 months, 48 months
- **Method:**
  - Dynamic random-effects probit model



# State dependence analysis

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- **Method:**
  - Dynamic random-effects probit model

3 factors influence longitudinal immunization pattern:.

- Initial response
- Genuine behavioural effect of past immunization
- Unobserved characteristics that influence immunisation and are persistent over time

# State dependence analysis

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# Immunisation transition matrix

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immunized at $t - 1$	immunized at $t$		Total <sub><math>t-1</math></sub>
	No	Yes	
No	71.41 (81.64)	28.59 (18.36)	6.57 (14.28)
Yes	4.40 (5.74)	95.60 (94.26)	93.43 (85.72)
Total <sub><math>t</math></sub>	8.80 (16.58)	91.20 (83.42)	

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# Results of dynamic model

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- Strong state dependence in child immunization (21 percentage points)
- This effect is exacerbated if a mother is discouraged from having her child immunized during the antenatal period
- Strong dependence for Māori; and for mothers who stated antenatally that they don't know whether they want to

# Qualitative Phase

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# Perceptions and experiences

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- **Authors:** Nadia Charania, Anjali Bhatia, Shirleyanne Brown, Tulu Leumoana, Hongxia Qi, Dharshini Sreenivasan, El-Shadan (Dan) Tautolo & Terryann Clark
- **Acknowledgements:** Participants and members of the Advisory Group
- **Research aim:**
  - Explore the ‘why’ behind empirical patterns of inequitable access to childhood health services among ethnically diverse caregivers

# Methodology & Methods

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- Qualitative description informed by Kaupapa Māori and Talanoa principles
- Caregivers of preschool aged children, who identified as being of Māori, Pacific, Asian and/or European ethnicity
- Semi-structured interviews and focus groups
  - Te Tai Tokerau (Northland) and Tāmaki Makaurau (Auckland) regions
- Reflexive thematic analysis (Braun & Clarke, 2022)
- Research team was linguistically- and culturally-matched
- Ethical approval from AUTECH (20/160)

# Results –

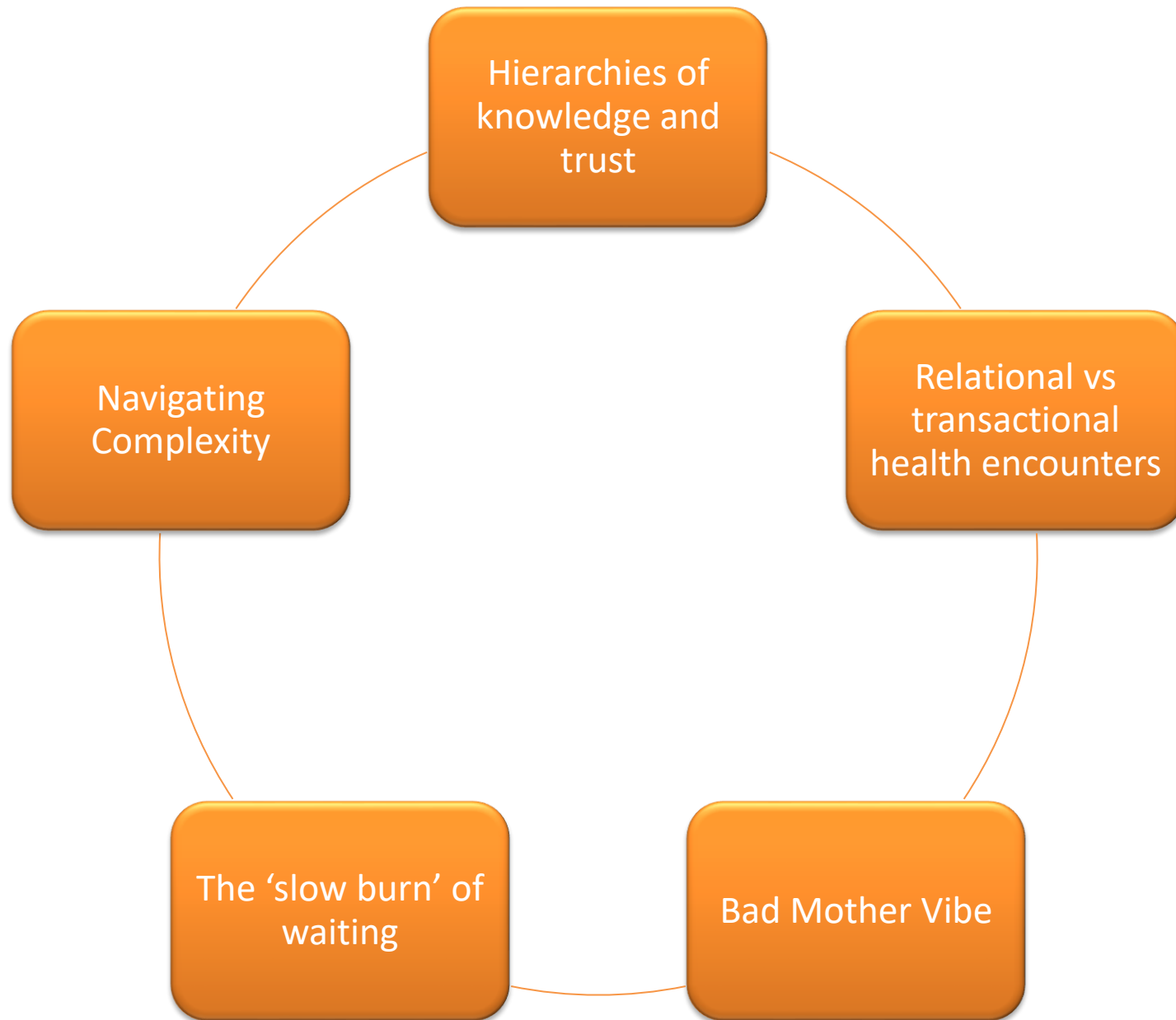
## Demographic Characteristics

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- N=145
  - 83 Māori, 19 Pacific, 12 Indian, 12 Chinese, and 19 Pākehā caregivers
- Almost all were female (95%)
- Half of the caregivers (49%) were between 30-39 years old
- About one third (35%) were born overseas and had lived in NZ for 12 years on average.
- Among caregivers who responded
  - The majority (98%) of children were enrolled with a GP office
  - The majority (79%) of children were fully vaccinated



# Results - Themes



# Results

## Hierarchies of Knowledge and Trust

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- Caregivers' instincts

*"You're trying to talk to them [health care provider] so that they can understand what's going on, but it's like 'yeah, yeah, yeah' ... you don't even listen ... 'we are the nurse, we know what we're doing. You don't know anything' because that's how I feel when they do that." (Pacific caregiver)*

- HCPs (especially those with children)

- Informal 'parent network'

*"They [parent network] provide you more information sometimes than the midwife. Like experienced moms, moms who already have kids who have been through that stage." (Indian caregiver)*

- Traditional healers and medicine

*"I wouldn't let them operate until he signed, he would operate as if he was operating on his own child. I brought the whole operating team into her room, and we did karakia." (Māori caregiver)*

# Results

## Relational vs Transactional Health Encounters

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- Transactional nature of health appointments
  - Opportunity for authentic whanaungatanga (relationship building)
- Inviting health environments and kind HCPs

- Building relationships and continuity of care

*“I would have lost my youngest son, if it wasn’t for her [midwife], she was there for me 24/7”*  
(Pacific caregiver)

*“Oh no, I’m alone now...”* (Pākehā caregiver)

- Mothers feeling neglected postpartum

*“It’s like we just have to go through this checklist ... ‘sorry I have to ask these questions’. She [nurse] just wants me to say ‘no’ to everything. So I felt kind of uncomfortable saying ‘well yeah, I am kind of experiencing that [mental health issue]’ and her being like ‘oh you’re probably not’.”* (Pākehā caregiver)

# Results

## Bad Mother Vibe

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- Struggles with motherhood
  - Overwhelmed, pressure, guilt, and shame
- Judgement and fear of being a ‘bad mother’

*“In my generation we were always judged... in that moment of crisis and need, you shut your mouth.”* (Māori caregiver)

*“And then she [lactation consultant] called me to follow-up a few weeks after she helped me and then I told her [that I changed to formula and] I felt like I was disappointing her.”* (Pākehā caregiver)

- Racist stereotypes

*“I encountered a doctor who has strong bias for Chinese parents. Before I say anything, he started his accusation for Chinese by complaining ‘you Chinese like to feed your kids medicine’.”* (Chinese caregiver)

- History of policing Māori whānau

*“Plunket... they’re not great. I have had bad experiences. When I had my first baby they were supposed to come and see me, but they said come in and see them. Then they said I look highly likely to harm my baby because I looked tired. I didn’t see Plunket for about a year.”* (Māori caregiver)

# Results

## The 'slow burn' of waiting

- Long wait for short consultations
  - Children were in pain/discomfort for longer than necessary
  - Grateful for free services, but some were willing to pay for faster services
- Influenced caregivers' health-seeking behaviours
  - Went to emergency or did not access care at all
  - Some caregivers felt like a burden on the system

*“My Plunket nurse was my go to. So, I would text her or call her, but again you know the amount of stress those people go through, so you don't always feel comfortable going, you know she's always available for me, so you would only text her or call her if you really, really need to.”* (Indian caregiver)

- Limited options for care
  - Could be perceived as ungrateful or demanding

# Results

## Navigating Complexity

- System was difficult to navigate
  - ‘Gatekeepers’ for care
- Lack of awareness of services and different expectations, especially among migrants
- Transportation costs
- Language barriers, especially related to medical terminology

*“Due to the language barrier, I have a sense of insecurity... I would be concerned that what if I cannot understand the doctor.”* (Chinese caregiver)

- Caregivers as kaitiaki (protectors)
  - Must be assertive and proactive

*“Oh, gosh. Dental clinic, right. I have to follow them up for... It was like, ‘Can you see my son? Can you see my son? Is it time to see my son?’ Literally, I went in there with my son who was... Oh, god, what was it? He would have been one or over one. They didn't even look in his mouth. They just gave me a couple pamphlets, and said a couple of things, and then sent me on my way basically.”* (Pākehā caregiver)

# Discussion

## Policy vs Reality

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- “Zero-fee” policies reduce financial barriers
- Other barriers and indirect costs influence accessing care
  - System was complex, bureaucratic and fragmented
  - Transportation costs
  - Language barriers
  - Geographical proximity to and availability of services
  - Opportunity costs (e.g., taking time off work)
  - Paying out-of-pocket if not eligible (depending on caregiver’s visa status)

# Discussion

## Transnational expectations and practices

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- Migrant families had unmet health needs
  - Long wait times, difficult to navigate, limited support postpartum, practices that eroded trust in HCPs
- Influence of transnational ties and expectations of postpartum and early childhood care
  - Migrants compared NZ's health system to that in their countries of origin
  - Asian migrant mothers' parallel use of health care systems and medicines in countries of origin and residence to optimise care for their children



# Discussion

## Building relationships and improving health encounters

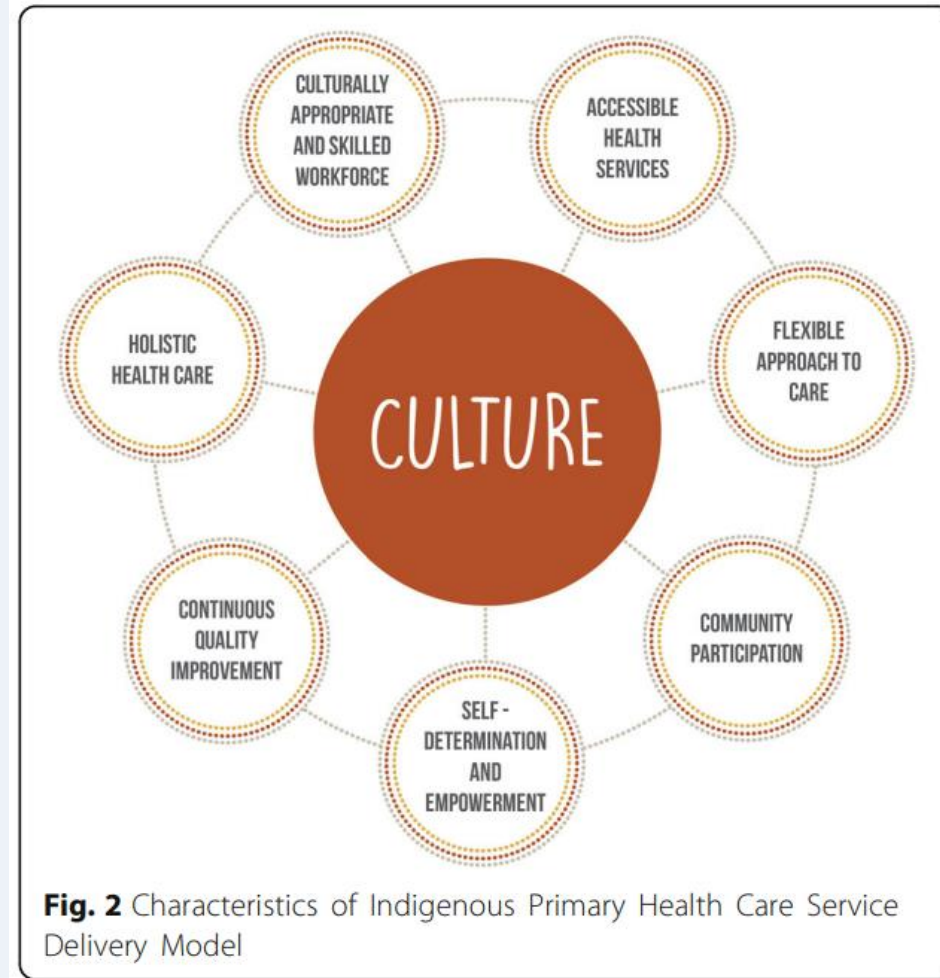
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- Caregivers want care based on relationships (not “tick-box” experiences) and welcoming health environments
  - Not necessary for HCPs to be of same ethnic background or share cultural values, just be kind and competent
  - Particularly important to support Mums postpartum
- Equal partners, can combine knowledge
  - Caregivers value HCPs’ knowledge, and HCPs should value caregivers’ knowledge
  - Less judgement from the system and HCPs

# Discussion

## Ongoing colonial trauma among Māori whānau

- Pressure to conform to Western ideals of parenting and systemic racism
- Caregivers have the mana (control) to choose
- More options, more flexibility, and in a manner that respects their cultural knowledge and values
- Mainstream services could better incorporate characteristics underpinning Indigenous primary health care service delivery models (Harfield et al., 2018)



# Implications for Policy and Practice



# Implications for Policy & Practice

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- Additional policies and strategies to reduce indirect costs of accessing health services
  - All childhood health services should be free regardless of child's citizenship or immigration status
- HCPs to develop trusting relationships and delivery culturally safe care
  - Importance of encouragement for immunisations
    - Earlier the better - can increase the likelihood of attending future events
  - Policies to address systemic racism
- Better support mothers postpartum and take a more whānau-centred approach
- Improve navigation of health system and bridge care between various services
  - Better access to interpreter services
  - Offer welcome orientation sessions

# Study References

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Bhatia A, Qi H, Charania NA. Chinese and Indian migrant mothers' perceptions and experiences of utilising early childhood healthcare services in Aotearoa New Zealand: A qualitative descriptive study. (Submitted for publication).

Brown S, Toki L, Clark TC. Māori Māmā views and experiences of vaccinating their pēpi and tamariki: A qualitative Kaupapa Māori study. Auckland: New Zealand Work Research Institute 2021. Available from: <https://workresearch.aut.ac.nz/document-library/project-reports/latest-project-reports/maori-mama-views-and-experiences-of-vaccinating>

Charania NA, Bhatia A, Brown S, Leumoana T, Qi H, Sreenivasan D, Tautolo ED, Clark TC. *"I haven't even taken them to the doctors, because I have that fear of what to expect"* Perceptions and experiences of early childhood healthcare among ethnically diverse caregivers in Aotearoa New Zealand. (Submitted for publication).

Clark T, Dasgupta K, Lewycka S, Pacheco G, Plum A. Ethnic differences in the use and experience of child healthcare services in NZ: An empirical examination. 2020. Available from: [https://workresearch.aut.ac.nz/\\_\\_data/assets/pdf\\_file/0010/483319/report-final-final-2Dec2020.pdf](https://workresearch.aut.ac.nz/__data/assets/pdf_file/0010/483319/report-final-final-2Dec2020.pdf).

Dasgupta K, Pacheco G, Plum A. State dependence in immunisation and the role of discouragement. (Submitted for publication). Working paper available from: [https://www.aut.ac.nz/\\_\\_data/assets/pdf\\_file/0008/676646/Working-paper-22\\_04.pdf](https://www.aut.ac.nz/__data/assets/pdf_file/0008/676646/Working-paper-22_04.pdf)

Lewycka S, Dasgupta K, Plum A, Clark T, Hedges M, Pacheco G. Determinants of ethnic differences in the uptake of child healthcare services in New Zealand: a decomposition analysis. *International Journal for Equity in Health*. 2023;22(13). Available from: <https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-022-01812-3>

Sreenivasan D, Charania NA. Accessing early childhood health services among European mothers in Aotearoa New Zealand. (In preparation).