

EVIDENCE CENTRE
TE POKAPŪ TAUNAKITANGA

**FACTORS ASSOCIATED WITH
DISPARITIES EXPERIENCED
BY TAMARIKI MĀORI**
in the Care and Protection System

Updated Analysis – September 2020



**ORANGA
TAMARIKI**
Ministry for Children

EVIDENCE CENTRE

TE POKAPŪ TAUNAKITANGA

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The Oranga Tamariki Evidence Centre works to build the evidence base that helps us better understand wellbeing and what works to improve outcomes for New Zealand's children, young people and their whānau.

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Disclaimer:

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CONTENTS

OVERVIEW	4
KEY FINDINGS.....	5
DETAILED ANALYSIS.....	6
NEXT STEPS	13
APPENDIX A – METHOD.....	14
APPENDIX B – CONFIDENCE INTERVALS.....	18
APPENDIX C – REGIONAL DISPARITY.....	19

Stats NZ disclaimer

Data utilised for the analysis within this document are not official statistics, they have been created for research purposes from the Integrated Data Infrastructure (IDI) managed by Statistics New Zealand.

Access to the anonymised data used in this study was provided by Statistics NZ in accordance with security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business or organisation and the results in this Excel workbook have been confidentialised to protect these groups from identification.

Careful consideration has been given to the privacy, security and confidentiality issues associated with using administrative and survey data in the IDI. Further detail can be found in the Privacy impact assessment for the Integrated Data Infrastructure available from www.stats.govt.nz.

The results are based in part on tax data supplied by Inland Revenue to Statistics NZ under the Tax Administration Act 1994. This tax data must be used only for statistical purposes, and no individual information may be published or disclosed in any other form, or provided to Inland Revenue for administrative or regulatory purposes.

Any person who has had access to the unit-record data has certified that they have been shown, have read, and have understood section 81 of the Tax Administration Act 1994, which relates to secrecy. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

OVERVIEW

While Māori over-representation in the care and protection system (relative to the full population) has been known for some time, this analysis demonstrates the extent to which demographic, socioeconomic, and parent/child characteristics influence the disparities between tamariki Māori and 'NZ European and Other' ethnicities¹.

This paper investigates two key questions:

- Is there an impact on the measure of disparity between tamariki Māori and 'NZ European and Other' ethnicities when considering the influence of other socioeconomic and parent/child characteristics?
- Considering ethnicity without the influence of other socioeconomic and parent/child characteristics, are tamariki Māori more likely to enter and progress through the care and protection system compared to children of 'NZ European and Other' ethnicities?

This document should be considered as an initial quantitative exploration of disparities for tamariki Māori. It is intended to generate further discussion and analysis about disparities in the care and protection system. Future work would likely include qualitative analysis into specific areas of the Oranga Tamariki operating model, including input from practice experts. There has also been a limited two year data period since the formation of Oranga Tamariki so some of the trends shown in this document are not necessarily indicative of longer-term trends, as these trends will become clearer over time. This analysis can be repeated in the future once trends are able to be identified.

The analysis outlined in this document has found that disparities between tamariki Māori and 'NZ European and Other' ethnicities exist, however these are generally smaller when the overlap between other socioeconomic and parent/child characteristics and ethnicity are considered. Some of the factors included are:

- parental income
- socioeconomic decile
- recent parent Corrections involvement
- school disengagement
- mental health provider contact/treatment
- involvement in victimisations and/or offending.

¹ For detailed information about how 'Māori' and 'NZ European and Other' ethnicities are defined see Appendix A.

KEY FINDINGS

Findings in this report come from two key focus areas:

a. Differences in care and protection involvement² for tamariki Māori and children of 'NZ European and Other' ethnicities

This section focuses on first time involvement in reports of concern for children with no prior CYF/Oranga Tamariki interaction, and 'first time' movements between successive stages of care and protection involvement³ for children with recent Oranga Tamariki interaction. This analysis was conducted for CYF/Oranga Tamariki interactions over the ten-year period to June 2019.

This analysis found that:

- ethnicity is statistically associated with differences in first time involvement for children in all age groups across most stages of the care and protection system, excluding first time movement into placement, however
- the differences between Māori and children of 'NZ European and Other' ethnicities are less when socioeconomic and other factors are controlled for.

These differences are detailed in Figure 1 on page 7.

b. Differences in care and protection involvement for tamariki Māori and children of 'NZ European and Other' ethnicities pre and post the formation of Oranga Tamariki

This section explores differences in care and protection involvement for tamariki Māori and children of 'NZ European and Other' ethnicities before and after the formation of Oranga Tamariki, by looking at the three year period up to and the two year period post establishment of Oranga Tamariki.

- Findings from this analysis were similar to the first area of focus (above) where a significant proportion of the disparity observed for first time movements between care and protection stages appear to be largely associated with socioeconomic and parent/child characteristics.
- Both the proportion of reports of concern (ROCs) and the relative disparity for Māori being reported has reduced post Oranga Tamariki formation. For all tamariki the number continuing onto assessments has also reduced, however this rate of reduction was lower for Māori resulting in their disparity slightly increasing. There are very slight increases in the proportion of tamariki continuing onto Family Group Conference (FGC)/Family Whānau Agreement (FWA) and first placement, however for these stages disparity between Māori and 'NZ European and Other' ethnicities has reduced and there are now no statistically significant differences.
- There are slight differences in trends, when split by age group.
- More detailed information is outlined in Tables 1, 2 and 3 in the pages below.

² This includes both Child, Youth and Family (CYF) and Oranga Tamariki involvement.

³ Details on how care and protection stages are calculated can be found in Appendix A.

DETAILED ANALYSIS

a. Differences in care and protection involvement for tamariki Māori and children of 'NZ European and Other' ethnicities

- A significant proportion of the ethnic disparity observed for first time movements between care and protection stages appears to be associated with some of the socioeconomic and parent/child characteristics utilised in this analysis⁴.

Examples of factors which appear to have a significant association with movements include:

- Lower parent income (e.g. parent income in lowest quartile, receiving main benefit)
- Parent history with Care and Protection and recent Corrections involvement
- Child's history of involvement with reports of concern, with greater weight placed on more recent reports and multiple instances of reporting
- For children under 5, Emergency Department (ED) contact with additional weight on injury-related ED contact
- For teenage children, recent indicators of school disengagement (e.g. extended truancy, stand-downs) and mental health/substance usage treatment. Victimization (recorded by Police as being a victim of an offence) is a factor associated with first time placement entry.
- The chart below (Figure 1) highlights the age groups and care and protection stages where ethnicity appears to have a statistically significant association with differences in first time movements after controlling for the influence of socioeconomic and other factors.
- **A ratio of 1x means that Māori children are as likely as children of 'NZ European and Other' ethnicities to be involved in a movement; a ratio greater than 1x means that Māori children are more likely than children of 'NZ European and Other' ethnicities to be involved in a movement.**

For example a ratio of 1.19x would mean that Māori children have a 19% greater chance than 'NZ European and Other' ethnicities to be involved in a movement.

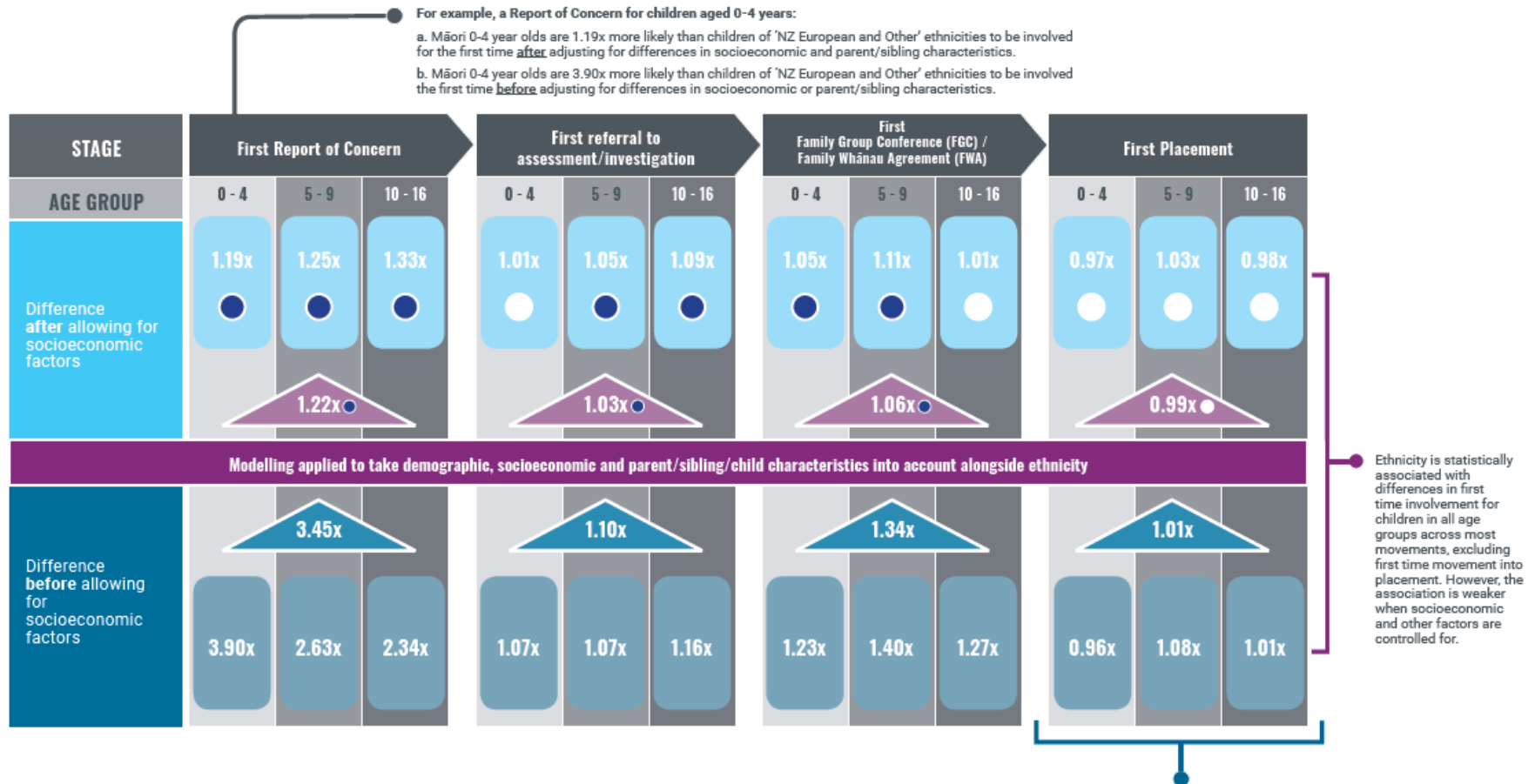
It is difficult to completely remove the impact of ethnicity from other socioeconomic effects, which are also correlated to and have some relationship with ethnicity. Further work is required to ascertain what proportion of the relationship between ethnicity and other socioeconomic factors is causal rather than correlative, i.e. how much systemic biasing factors are also inherent in the socioeconomic factors outlined in this paper. More qualitative information in this area will also assist in estimating the level of ethnicity bias that is associated with other socioeconomic factors (for example, identifying where operational practice may be applying "excess" weight within other socioeconomic factors that may also reflect ethnic disparity, such as parental Corrections involvement).

There is also some degree of correlation between socioeconomic factors and ethnicity, however where there has been excessive correlation these have been removed from the analysis.

⁴ These socioeconomic and parent/child characteristics are listed in Appendix A



Figure 1. Relative likelihood of tamariki Māori moving into each care and protection stage for the first time vs children of 'NZ European and Other' ethnicities



● Denotes where Māori children are more likely than children of 'NZ European and Other' ethnicities to move between care and protection stages after allowing for socioeconomic / other factors and the difference appears statistically significant (at the 5% level)

This analysis compares disparities between two groups. 'Māori' includes all tamariki who identify Māori as one of their ethnicities. 'NZ European and Other' includes New Zealand European, European, Asian, Middle Eastern/Latin American/African and 'other' ethnicities. This analysis was conducted for CYF/Oranga Tamariki interactions over the ten-year period to June 2019.

There is also regional variation in the level of disparity between Māori and ‘NZ European and Other’ ethnicities. Details of regional variation in disparity ratios both before and after controlling for the influence of socioeconomic and other factors can be found in Appendix C.

It is likely that regional variations will be influenced by differences associated with different profiles of reported need, caseload constraints, recording, casework practice, and other operational factors within Oranga Tamariki at the regional level. Likewise, regional differences will also be influenced by the operations and practices of reporter groups external to Oranga Tamariki, particularly agencies such as Police, Courts, Health, and Education. Further analysis would be required to determine the impact of this variability. There may also be regional variation in support services and organisations available to support families outside the care and protection system. This variation in supports may have some impact on the proportion who ultimately flow through into care and protection.

b. Differences in care and protection involvement for tamariki Māori and children of ‘NZ European and Other’ ethnicities pre and post the formation of Oranga Tamariki

Findings from this analysis were similar to the first area of focus (above) where a significant proportion of the ethnic disparity observed for first time movements between care and protection stages appears to be associated with some of the socioeconomic and parent/child characteristics.

The table below summarises the age groups and care and protection stages where ethnicity appears to have a statistically significant association with differences in first time movements after controlling for the influence of socioeconomic and other factors.

Table 1: Summary of care and protection stages where ethnicity is associated with a significant difference in first time movements into these stages after controlling for the influence of socioeconomic and other factors, split by age group, for activity in the period 1 April 2014 to 31 March 2019

	First Report of Concern	First referral to assessment / investigation (for those reported)	First FGC/FWA (for those with recent reports and assessments)	First Placement (for those with recent FGC/FWAs)
0-4	✓	✓	✓ (pre OT establishment) ✗ (post OT establishment)	✗
5-9	✓	✓	✗	✗
10-16	✓	✓	✗	✗

Key: ✓ Statistically significant (at the 5% level) ✗ Not statistically significant (at the 5% level)

Ethnicity is statistically associated with differences in first time movement for children in all age groups across most movements, excluding first time movement into placement, and first FGC/FWA.

Tables 2 and 3 below show a more comprehensive picture of tamariki Māori vs children of ‘NZ European and Other’ ethnicities in pre and post Oranga Tamariki establishment contexts. These tables highlight:

- The average proportion of tamariki Māori and children of ‘NZ European and Other’ ethnicities who moved from one care and protection stage to another for the first time over a year.
- The relative likelihood of tamariki Māori moving into each care and protection stage for the first time, relative to children of ‘NZ European and Other’ ethnicities, before and after controlling for the influence of other factors. These relative likelihood ratios are also known as “disparity ratios”.

Note: 95% confidence intervals for disparity ratios after controlling for socioeconomic and other factors have been calculated and are given in the table in Appendix B.

For example in Table 2 below, for children involved in a report of concern over the three year period to 31 March 2017:

- 4.0% of Māori children and 1.2% of children of 'NZ European and Other' ethnicities with no prior report history were involved in first time reports of concern each year (on average).
- Māori children were 3.4x more likely than children of 'NZ European and Other' ethnicities to be involved in a report of concern for the first time, before controlling for socioeconomic and other factors.
- After controlling for other factors, Māori children were 1.2x more likely than children of 'NZ European and Other' ethnicities to be involved in a report of concern for the first time.

Table 2: Trends in care and protection stages pre and post Oranga Tamariki formation – Māori compared to 'NZ European and Other' ethnicities⁵

Average proportion of children who moved into each care and protection stage for the first time - before controlling for other factors				
Event	Māori		'NZ European and Other' ethnicities	
	Over the 3 years to 31 March 2017	Over the 2 years post 1 April 2017	Over the 3 years to 31 March 2017	Over the 2 years post 1 April 2017
First report of concern	4.0%	3.8%	1.2%	1.2%
First referral to assessment / investigation ¹	55%	44%	50%	35%
First FGC/FWA ²	14%	15%	10%	13%
First placement ³	16%	17%	15%	16%

Relative likelihood of Māori children moving into each care and protection stage for the first time relative to children from 'NZ European and Other' ethnicities				
Event	Over the 3 years to 31 March 2017		Over the 2 years post 1 April 2017	
	Before controlling for other factors	After controlling for other factors	Before controlling for other factors	After controlling for other factors
First report of concern	3.40x	1.20x	3.16x	1.16x
First referral to assessment / investigation ¹	1.10x	1.05x	1.24x	1.14x
First FGC/FWA ²	1.39x	1.09x	1.22x	0.96x
First placement ³	1.07x	n/a ⁶	1.03x	n/a ⁶

¹ For those recently reported

² For those with recent reports and assessments

³ For those with recent FGC/FWAs

⁵ Blue text in the table above denotes where tamariki Māori are more likely than children of 'NZ European and Other' ethnicities to move between care and protection stages after allowing for socioeconomic / other factors and the difference appears statistically significant (at the 5% level).

⁶ Results of "n/a" are given where results were already close to 1 and no different from each other so no further analysis was done, or where the numbers were too small to do an accurate regression analysis.

From the table above some trends can be seen when comparing results pre and post Oranga Tamariki formation:

This section outlines key observations around changes in the rates of movement between care and protection stages before and after Oranga Tamariki establishment.

Note: care should be taken in drawing conclusions on possible trends in the Oranga Tamariki period; we only have two years of data and differences over this period may not represent trends in the longer run.

First Report of Concern

- Māori are now 1.16x more likely than 'NZ European and Other' ethnicities to have a first ROC, slightly down from 1.20x pre Oranga Tamariki formation. This appears to be driven by a reduction in the proportion of Māori children being reported for the first time (down from 4.0% to 3.8%), relative to 'NZ European and Other' ethnicities (which have remained static).
- A possible confounding factor is that first time reporting rates were higher in 2018 than in 2017 or 2019, across all ethnicities and most ages. We only have two years of data post the establishment of Oranga Tamariki, so it is not yet clear whether this is year-to-year variation or a one-off spike we would not expect to see in future years.

First referral to assessment investigation

- First time referrals to assessment / investigations from reports decreased significantly over 2014-17 across all ages and ethnicities as a result of practice changes. Since then referral rates have varied over time and by age, but to a much smaller extent.
- Disparity ratios have increased for Māori post Oranga Tamariki establishment (up from 1.05x to 1.14x), as the decrease in Māori referral rates (down 11 percentage points) was smaller than for children with 'NZ European and Other' ethnic backgrounds (down 15 percentage points).

First time involvement in FGC/FWAs (for children recently reported and assessed)

- The 2017-19 decrease in disparity ratios appears to be driven by an increase in first time FGC rates for children of 'NZ European and Other' ethnicities, with Māori rates remaining similar or increasing by a smaller extent from previous years.

First placement (for children recently involved in FGC/FWAs)⁷

First time placement entry rates can vary considerably from year to year – it is harder to establish trends given we have relatively few observations.

⁷ This analysis excludes placement entries where no FGC/FWA occurred in the same quarter (or in previous quarters), e.g. emergency placements and placements that occur well before an FGC is recorded. These entries that do not follow the "typical" process represent around 20% of the placement entries for children aged 0-12 and around 60% of the placement entries for teenagers aged 13-16 (some of these are associated with Youth Justice activity). If placement entries following a report of concern and assessment/investigation were to be included in the definition of placements, including those that did not have an FGC, then the proportion of entries not counted would reduce to less than 10% for children aged 1-15, i.e. excluding children aged 0 and 16.

Table 3: Trends in care and protection stages pre- and post-Oranga Tamariki formation – tamariki Māori compared to 'NZ European and Other' ethnicities, by age group⁸

Average proportion of children who moved into each care and protection stage for the first time over a year - before controlling for other factors					
Event	Age Group	Māori		'NZ European and Other' ethnicities	
		Over the 3 years to 31 March 2017	Over the 2 years post 1 April 2017	Over the 3 years to 31 March 2017	Over the 2 years post 1 April 2017
First report of concern	0 ⁹	10.3%	9.1%	2.2%	2.2%
	0-4	6.3%	5.9%	1.6%	1.5%
	5-9	2.8%	3.0%	1.1%	1.1%
	10-16	2.4%	2.1%	0.9%	1.0%
First referral to assessment / investigation (for those recently reported)	0-4	56%	45%	52%	36%
	5-9	54%	41%	48%	34%
	10-16	54%	44%	50%	35%
First FGC/FWA (for those with recent reports and assessments)	0-4	19%	20%	15%	20%
	5-9	12%	14%	8%	10%
	10-16	11%	12%	8%	10%
First placement (for those with recent FGC/FWAs)	0-4	21%	24%	21%	24%
	5-9	13%	14%	12%	12%
	10-16	12%	12%	11%	13%

Relative likelihood of Māori children moving into each care and protection stage for the first time relative to children from 'NZ European and Other' ethnicities					
Event	Age group	Over the 3 years to 31 March 2017		Over the 2 years post 1 April 2017	
		Before controlling for other factors	After controlling for other factors	Before controlling for other factors	After controlling for other factors
First report of concern	0 ⁹	4.64x	1.14x	4.14x	1.04x
	0-4	4.04x	1.17x	3.81x	1.12x
	5-9	2.49x	1.17x	2.63x	1.19x
	10-16	2.58x	1.39x	2.14x	1.27x
First referral to assessment / investigation (for those recently reported)	0-4	1.08x	1.04x	1.23x	1.13x
	5-9	1.11x	1.08x	1.20x	1.15x
	10-16	1.08x	1.05x	1.25x	1.16x
First FGC/FWA (for those with recent reports and assessments)	0-4	1.3x	1.09x	1.02x	0.90x
	5-9	1.37x	1.09x	1.40x	1.09x
	10-16	1.34x	1.07x	1.16x	0.92x
First placement (for those with recent FGC/FWAs)	0-4	0.99x	n/a ¹⁰	1.00x	n/a ¹⁰
	5-9	1.13x	1.11x	1.11x	0.98x
	10-16	1.05x	1.02x	0.94x	n/a ¹⁰

⁸ Blue text in the table above denotes where Māori children are more likely than children of 'NZ European and Other' ethnicities to move between care and protection stages after allowing for socioeconomic / other factors and the difference appears statistically significant (at the 5% level).

⁹ For First Report of Concern, age '0' highlights results for babies, however for consistency with other metrics age '0' is also included in the '0-4' age group.

¹⁰ Results of "n/a" are given where results were already close to 1 and no different from each other so no further analysis was done, or where the numbers were too small to do an accurate regression analysis.

Age related observations related to trends pre and post Oranga Tamariki formation:

Within this analysis the proportion of children identified at each stage of the care and protection process is higher for younger age groups, as this analysis focuses on 'first time' movements between successive stages of care and protection involvement¹¹. This is shown by the percentages given in Table 3 on the previous page.

First Report of Concern

- Disparity ratios for children aged 0 (and to a lesser extent ages 1-4 and 10-16) have decreased post 2017.
- First time reporting rates for children of 'NZ European and Other' ethnicities aged 5 and over increased slightly over 2018-19, also contributing to this reduction in disparity.
(It is important to note the Māori first time reporting rate is still multiples higher than for children with 'NZ European and Other' ethnicities. Nearly 1 in 10 Māori children are reported before their 1st birthday.)

First time involvement in FGC/FWAs (for children recently reported and assessed)

- Disparity ratios have decreased post 2017 for children aged 0-4 and 10-16 and remained broadly similar for children aged 5-9, with most of the decrease observed in 2019. This appears to be primarily driven by an increase in first time FGC involvement for children of 'NZ European and Other' ethnicities.
- In 2018-2019, Māori aged 13-16 were less likely than 'NZ European and Other' children to be involved in FGC/FWAs for the first time.

First placement (for children recently involved in FGC/FWAs)

- Disparity ratios for Māori children aged 0 (and to a lesser extent 1-4 year olds) increased marginally post Oranga Tamariki establishment. This is because placement entry rates for Māori children increased by a greater extent than for children of 'NZ European and Other' ethnicities.
- Raw disparity ratios for Māori children aged 5 and over are close to 1, i.e. no difference between Māori and 'NZ European and Other' ethnicities beyond what is already present from reporting, assessment and FGC rates.
- Placement entry rates for 0 year olds (and to a lesser extent 1-4 year olds) were higher in 2018-19, post Oranga Tamariki establishment. Placement entry rates have also substantially increased for 16 year olds although this will be linked to raising the age of care to 17. Māori placement entry rates for 5-15 year olds are broadly similar while entry rates for children of 'NZ European and Other' ethnicities aged 5-15 increased in 2018-19.

¹¹ Details on how care and protection stages are calculated can be found in Appendix A.

NEXT STEPS

This work should be considered as an initial quantitative exploration of disparities experienced by tamariki Māori.

This work establishes a base from which discussions and further analysis can be carried out. It is intended that more insight will be gained through further exploration in key areas such as:

- Identifying specific areas of focus for case note analysis
- Gathering input from the wider business around potential drivers for disparity (including input from practice experts)
- How we think about and measure disparity and disproportionality
- Refining understanding of the relationships between ethnicity and other socioeconomic variables that have relationship with ethnicity, so that the impact of disparity can be better understood (from both a perspective of “systemic” and “discretionary” biasing factors).

It is also important to note that this analysis is currently limited in regard to the comparison of disparity for tamariki Māori pre and post formation of Oranga Tamariki, due to the short time period since formation.

It is possible that this analysis will need to be repeated in future so that long term trends can start to be identified.

APPENDIX A – METHOD

Treatment of ethnicity

There are four high level categories Oranga Tamariki uses to describe ethnicity:

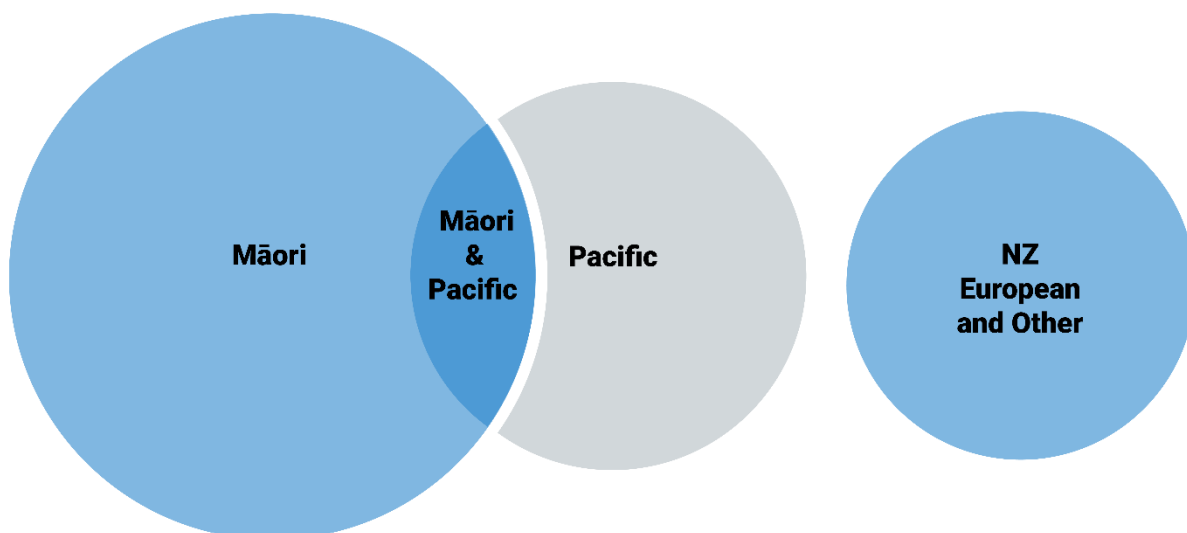
1. Māori – children who identify Māori (but not Pacific) as one of their ethnicities
2. Māori & Pacific – children who identify both Māori and Pacific as their ethnicities
3. Pacific – children who identify Pacific (but not Māori) as one of their ethnicities
4. NZ European and Other – children who do not identify Māori or Pacific as any of their ethnicities. This includes New Zealand European, European, Asian, Middle Eastern/Latin American/African and other ethnicities.

These categories are mutually exclusive.

It is not uncommon for an individual to have multiple ethnicities, particularly crossing between Māori and Pacific communities. The 'Māori & Pacific' category includes children and young people who have ever been recorded as both Māori and Pacific. The diagram below shows how these categories overlap.

This report compares disparities between two groups (shaded blue in the diagram below).

- a. Māori – this group includes the 'Māori' and 'Māori & Pacific' categories outlined above.
- b. NZ European and Other – this group includes the 'NZ European and Other' category. 'NZ European and Other' includes New Zealand European, European, Asian, Middle Eastern/Latin American/African and other ethnicities.



NB: Image has not been drawn to scale

Note that the 'Pacific' category has been excluded from this analysis because the group of interest here is Māori. Future reporting could focus on disparities between 'Pacific' and 'NZ European and Other' ethnicities and exclude Māori.

a. **Method of analysis on differences in care and protection involvement for tamariki Māori and children of 'NZ European and Other' ethnicities**

Statistical analysis was performed in the Statistics New Zealand Integrated Data Infrastructure (IDI) to explore differences in CYF/Oranga Tamariki involvement for tamariki Māori and children of 'NZ European and Other' ethnicities over the 10 year period to 30 June 2019, taking into account **demographic, socioeconomic and parent/sibling/child characteristics** which are visible in administration datasets and have been suggested by research studies as being associated with care and protection concerns.

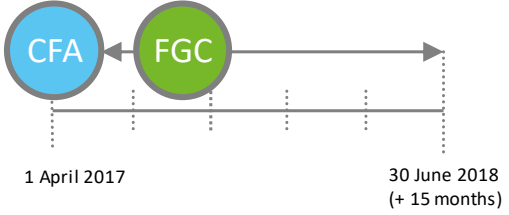
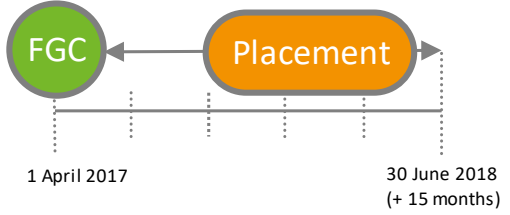
Factors allowed for to perform statistical analysis in the IDI, in order to explore differences in CYF/Oranga Tamariki involvement for tamariki Māori and children of 'NZ European and Other' ethnicities over the 10 year period to 30 June 2019 include:

- **Demographic:** Age, gender, ethnicity
- **Socioeconomic:** Parent income (grouped), education levels, recent and lifetime benefit receipt, socioeconomic decile, frequent address changes
- **Parent history:** Parent history with Child Youth & Family, recent and lifetime Corrections involvement, mental health / substance usage service contact
- **Child history:** Child and sibling reports of concern and Police Family Violence Centre notifications to Oranga Tamariki (for examining likelihood of involvement in statutory Care & Protection), Police recorded victimisations, recent emergency department contact, potentially avoidable hospitalisations and mental health service contact, B4 School Check referrals, school disengagement indicators, and (for ages 13+) Police recorded offences.

This analysis focused on first time involvement in reports of concern for children with no prior CYF/Oranga Tamariki interaction, and 'first time' movements between successive stages of care and protection involvement for children with recent CYF/Oranga Tamariki interaction. This report focuses on the following movements:

1. being involved in a report of concern for the first time
2. being involved in a care and protection FGC or FWA for the first time, for children involved in reports of concern within the last 15 months
3. entering a foster or family/whānau placement for the first time, for children involved in FGCs or FWAs within the last 15 months.

The graphics below illustrate examples of what would be counted as 'first time' movements into FGC or placement stages.

<p>'First time' FGC example: A child is involved in a report of concern and referred for a Child & Family Assessment (CFA) on 1 April 2017. They have never been involved in an FGC or placed into care.</p>	<p>'First time' placement example: A child is involved in an FGC on 1 April 2017. They have never been in care.</p>
<p>If they are involved in an FGC between 1 April 2017 and 30 June 2018 (15 months after the assessment), this is counted as having first time FGC involvement following recent Oranga Tamariki interaction.</p>	<p>If they are placed into care between 1 April 2017 and 30 June 2018 (15 months after the assessment), this is counted as entering care for the first time following recent Oranga Tamariki interaction.</p>
	

Repeat movements (e.g. reports for children with prior reporting history) and movements outside the 'standard' sequence of casework stages (e.g. emergency placements for children with no prior FGC/FWAs) will be considered in a later stage of analysis. We expect that repeat movements will show similar or smaller differences by ethnicity, as any differences that appear to be associated with ethnicity will be partially or wholly captured by factors reflecting previous CYF/Oranga Tamariki involvement.

Key considerations and limitations

A key limitation to this analysis is that **many of the factors considered at an operational level were not available for consideration** (for example, the nature of the safety concerns reported for children, child and family/whānau needs and strengths, availability of NGO and other supports). Partly due to this, the findings highlight the association between Oranga Tamariki involvement and socioeconomic and selected parent/child characteristics at a group level, but also show substantial variation between outcomes for individual children and across different regions.

It is also important to bear in mind that **ethnic disparities are also present in many of the socioeconomic and parent/child characteristics** controlled for in this analysis. By controlling for these, the analysis is aimed at identifying additional disparity over and above that in those characteristics. If there is ethnic disparity in the relative likelihood of different children moving between care and protection stages, then it is possible that this may be captured by these other factors, rather than being explicitly attributed to ethnicity in its own right.

b. Method of analysis on the involvement for tamariki Māori and children of 'NZ European and Other' ethnicities pre and post the formation of Oranga Tamariki

The second phase of this study involved statistical analysis in the IDI to explore differences in Oranga Tamariki involvement for tamariki Māori and children of 'NZ European and Other' ethnicities over two periods:

- the three year period leading up to Oranga Tamariki establishment (1 April 2014 to 31 March 2017)
- the two year period post Oranga Tamariki establishment (1 April 2017 to 31 March 2019¹²)

Apart from the narrower date ranges used, we used the approach described in the previous section.

¹² Analysis of activity post-Oranga Tamariki establishment was limited to two years due to limits in IDI data coverage. IDI data was not available beyond 30 June 2019 at the time of analysis.

APPENDIX B – CONFIDENCE INTERVALS

The table below shows the 95% confidence interval estimates for disparity ratios after controlling for other factors. (Confidence interval estimates represent a range of values that is likely to contain the true disparity ratio. If a 95% confidence interval only includes values greater than 1, this means that Māori ethnicity is associated with an increased likelihood of movement between care and protection stages that is statistically significant at the 5% level, even after controlling for socioeconomic and other factors.)

Relative likelihood of Māori children moving into each care and protection stage for the first time relative to children of 'NZ European and Other' ethnicities		
Event	Over the 3 years to 31 March 2017 95% confidence interval for relative likelihood after controlling for other factors	Over the 2 years post 1 April 2017 95% confidence interval for relative likelihood after controlling for other factors
First report of concern	(1.18, 1.23)	(1.12, 1.20)
First referral to assessment / investigation ¹	(1.03, 1.07)	(1.11, 1.17)
First FGC/FWA ²	(1.03, 1.15)	(0.90, 1.02)
First placement ³	n/a ¹⁴	n/a ¹⁴

¹ For those recently reported, ² For those with recent reports and assessments, ³ For those with recent FGC/FWAs

Relative likelihood of Māori children moving into each care and protection stage for the first time relative to children of 'NZ European and Other' ethnicities, by Age			
Event	Age group	Over the 3 years to 31 March 2017 95% confidence interval for relative likelihood after controlling for other factors	Over the 2 years post 1 April 2017 95% confidence interval for relative likelihood after controlling for other factors
First report of concern	0 ¹³	(1.09, 1.2)	(0.97, 1.12)
	0-4	(1.14, 1.21)	(1.07, 1.17)
	5-9	(1.12, 1.22)	(1.12, 1.26)
	10-16	(1.32, 1.45)	(1.19, 1.35)
First referral to assessment / investigation (for those recently reported)	0-4	(1.01, 1.07)	(1.08, 1.17)
	5-9	(1.04, 1.13)	(1.09, 1.21)
	10-16	(1.01, 1.09)	(1.1, 1.23)
First FGC/FWA (for those with recent reports and assessments)	0-4	(1.02, 1.18)	(0.83, 0.99)
	5-9	(0.99, 1.21)	(0.96, 1.23)
	10-16	(0.97, 1.18)	(0.81, 1.04)
First placement (for those with recent FGC/FWAs)	0-4	n/a ¹⁴	n/a ¹⁴
	5-9	(0.93, 1.33)	(0.78, 1.23)
	10-16	(0.85, 1.22)	n/a ¹⁴

¹³ For First Report of Concern, age '0' highlights results for babies, however for consistency with other metrics age '0' is also included in the '0-4' age group.

¹⁴ Results of "n/a" are given where results were already close to 1 and no different from each other so no further analysis was done, or where the numbers were too small to do an accurate regression analysis.

APPENDIX C – REGIONAL DISPARITY

The two tables below show both the national and regional disparity ratios across care and protection stages, giving both the ratio adjusted for the influence of other socioeconomic and parent/child characteristics¹⁵, as well as the ratio before adjusting for these factors.

Table 1: Disparity ratios by care and protection stages (Māori vs 'NZ European and Other' ethnicities), after adjusting for socioeconomic and parent/child characteristics¹⁶ – by Oranga Tamariki region

		First report of concern	First referral to assessment / investigation ^A	First FGC / FWA ^B	First placement ^C
Ratio After allowing for socio-economic factors	National	1.22x	1.03x	1.06x	0.99x
	Te Tai Tokerau	1.20x	1.03x	0.96x	0.92x
	North and West Auckland	1.22x	1.08x	1.15x	1.03x
	Central Auckland	1.23x	1.09x	1.08x	0.93x
	South Auckland	1.24x	1.07x	0.92x	1.21x
	Waikato	1.15x	1.10x	0.91x	1.09x
	Bay of Plenty	1.26x	1.04x	1.18x	1.02x
	East Coast	1.17x	0.96x	1.28x	0.89x
	Taranaki-Manawatu	1.22x	1.01x	1.00x	0.84x
	Wellington	1.17x	1.01x	1.09x	0.89x
	Upper South	1.31x	0.92x	1.03x	0.81x
	Canterbury	1.37x	0.91x	0.97x	0.89x
	Lower South	1.20x	0.99x	1.28x	1.32x

^A For those recently reported

^B For those with recent reports and assessments

^C For those with recent FGC/FWAs

¹⁵ Other socioeconomic and parent child characteristics include: Parental Income, Socioeconomic decile, recent Corrections involvement, school disengagement, mental health provider contact/treatment, involvement in victimisations and/or offending

¹⁶ Because there are reduced volumes within each care and protection stage at the regional level there is reduced reliability in the ratios given after modelling for socioeconomic and other parent/child characteristics has been carried out. Although not specifically analysed, it is expected that more of the differences shown would not be "statistically significant at the 95% confidence level" due to the smaller counts when child populations are split down to the regional level.

Table 2: Disparity ratios by care and protection stages (Māori vs 'NZ European and Other' ethnicities), before adjusting for socioeconomic and parent/child characteristics – by Oranga Tamariki region

		First report of concern	First referral to assessment / investigation ^A	First FGC / FWA ^B	First placement ^C
Ratio Before allowing for socio-economic factors	National	3.45x	1.10x	1.34x	1.01x
	Te Tai Tokerau	3.14x	1.08x	1.63x	0.99x
	North and West Auckland	3.51x	1.10x	1.43x	1.10x
	Central Auckland	5.24x	1.14x	1.88x	0.97x
	South Auckland	4.85x	1.02x	1.45x	1.38x
	Waikato	2.87x	1.06x	1.48x	0.89x
	Bay of Plenty	2.93x	1.07x	1.42x	0.94x
	East Coast	3.13x	1.03x	1.34x	1.02x
	Taranaki-Manawatu	2.65x	1.07x	1.38x	0.90x
	Wellington	3.57x	1.18x	1.51x	1.11x
	Upper South	2.62x	1.04x	1.07x	0.81x
	Canterbury	2.80x	1.08x	1.08x	1.08x
	Lower South	2.56x	1.08x	1.09x	1.40x

^A For those recently reported

^B For those with recent reports and assessments

^C For those with recent FGC/FW