

**Intensive Intervention:  
Exploring long-term outcomes for clients referred from  
Oranga Tamariki to Family Help Trust**



**July 2019**

## A. Executive Summary

In 2019 Family Help Trust and Oranga Tamariki, Partnering for Outcomes, reviewed the performance of their intensive, comprehensive and practical home visiting services to complex families referred to the Trust by Oranga Tamariki sites in Canterbury. Over 203 cases were reviewed regarding the demographic of the client, key characteristics of the intervention, care and protection outcomes from the perspective of ongoing involvement of Oranga Tamariki. The review was also undertaken to appreciate the relevance of the performance measures for the programme and test the effectiveness of using both provider data and Oranga Tamariki data (CYRAS) to appreciate the client's journey.

Both descriptive and analytical statistics were used, the latter highlighting the statistically significant findings when understanding the relationship between factors such as age, ethnicity, care history of both mother and child, duration and completion of the programme, with outcomes such as reports of concern, substantiated findings of abuse and custody orders post programme participation.

Key findings include:

- The clients referred to Family Help Trust by Oranga Tamariki are representative of the population of children that are in the custody of the Chief Executive in Canterbury, e.g. Māori 51% and non-Māori 49%.
- Most whānau will engage in the service when referred. Initial uptake, defined by consent to participate, rates are high (95%). However, screening by Oranga Tamariki for likelihood of uptake needs to be factored in.
- Approximately 30% completed the service, while 30% left the service for various reasons such as moving away (nearly 20%).
- Of those that don't complete for reasons related to the care and protection of children (42%), 13% go into kin care, 13% come into custody and 15% otherwise do not achieve the care and protection goals. Of those that don't complete (all reasons), 50% leave the programme within the first 3 months.
- This isn't a short-term intervention. Successful graduation was rarely before one year, and most often after 2 or even 3 years.

- When comparing the care and protection outcomes of those that completed, to those that 'dropped out', the outcomes are better for those that completed. **Those that complete are 3.5 times more likely to not have a subsequent custody episode.** Those that complete also have significantly fewer reports of concern. Of those reports of concern, there are significantly fewer substantiated findings. These findings are statistically significant when compared to those that do not complete due to alternative outcomes for their children (custody, kin care, etc). However, the picture is less clear when compared to those that do not complete for other reasons, e.g. moving away.
- Mothers and children with a care history were less likely to successfully complete. However, when the relationship is sustained for this group, the care and protection outcomes are even better when compared to their peers who do not complete the intervention.
- **When there is a history of care, and the intervention has been completed, these children are even more likely to stay out of care (5.2 times more likely to stay out of care)** when compared to the same cohort when they do not complete.
- For all results, there was no statistically significant difference by ethnicity. While Māori mothers were more likely to have higher risk scores at assessment, they were neither more or less likely to complete the programme or have increased or decreased likelihood of contact with Oranga Tamariki post intervention, when compared to non-Māori. This was equally true both when Māori mothers had either Pākehā or Māori support workers.

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## **B. Background**

Family Help Trust provide intensive, comprehensive and practical home visiting services to complex families preferably before the birth of a new infant. They receive referrals from a variety of sources, including Oranga Tamariki sites in Canterbury. Between 2002 and 2019, they engaged with 726 client-groups (mothers and children). Of which 203 or 32% were referrals from Oranga Tamariki.

The target group is mothers and with children under 5 years of age. Any area of family functioning that presents a risk to the safety of the child or children receives a planned intervention. A well-defined risk criterion ensures that only families, whose situation requires a long-term intervention receive it.

Practitioners are registered and qualified social workers. Need drives the required contact with clients, such that the Services are long term and can continue until the index child enters the school system. The hours of support are not limited however the average caseload at any one time is between 15 and 16.

Family Help Trust (FHT) have undertaken a series of external evaluations over the years, the most recent of which was conducted in 2015. Services are evidence based and we have longitudinal data going back 18 years. This is the first time however that Oranga Tamariki (Oranga Tamariki) has looked at longer term outcomes of the clients that it refers to the Trust.

## **C. Methodology**

The aim of the study was to a) understand the outcomes of the intensive intervention service with the intent of exploring outcomes-based contracting and b) testing some of the design assumptions made about intensive support to whānau with the intent of keeping tamariki in the home, specifically the study:

- Describes and explores the demographic of FHT client
- Describes and explores some key characteristics of the FHT intervention
- Describes and explores the outcomes of the intervention
- Explores possible indicators for measuring success of Oranga Tamariki intensive intervention
- Explores possible reporting and analytical methods using CYRAS data

Note that the aim of Oranga Tamariki intensive intervention function is to enable tamariki to remain safely at home with family/whānau, therefore ‘success’ is measured in no subsequent custody order, including placements with extended whānau or non-kin.

FHT and Oranga Tamariki have been in a contractual arrangement for FHT to provide intensive social work services to mothers with children under 5 years who are at risk of coming into care.

Unfortunately, Oranga Tamariki has not systematically recorded referrals to FHT through its client management system, CYRAS. However, FHT has systematically recorded the referrer in its EASI client management systems. Therefore, FHT was able to extract the required performance record for these clients (203 clients), allowing for matching (utilising name and date of birth (DOB) of mother, and name, and DOB of child) back to CYRAS records to understand post intervention outcomes. A 100% match was found for both tamariki and mother and this formed the sample cohort for this analysis.

A simulation of a timeline of each child’s life pre- and post- intervention in relation to CYRAS events (e.g. reports of concern, care placements) was used. This time-series data took a month-by-month view of a child’s status from the month of birth through to the present day (at time of extract, February 2019).

Descriptive statistics (averages, distributions, and cross tabs, e.g. age and ethnicity) were added as well as analytical statistics highlighting statistically significant differences in findings (ANOVA, odds ratios and multivariate logistic regression) (see Table 1 for a description of variables considered).

Multivariate analysis generally follows univariate analysis or ANOVA as has been done previously. To recap, those outcomes that we are interested in are (refer to previous description in Table 1):

**Table 1. Independent and dependent variables tested in univariate and multivariate analysis**

Independent Variables (Correlating Factors)	Dependent Variables (Outcomes)
<ul style="list-style-type: none"> <li>• Mother’s demographic variables               <ul style="list-style-type: none"> <li>• Ethnicity</li> <li>• Age at birth of child</li> <li>• Age at time of intervention</li> <li>• Her care and other CYRAS history (ROC, FAR)</li> </ul> </li> <li>• Child’s demographics               <ul style="list-style-type: none"> <li>• Ethnicity</li> <li>• Her/his care history</li> </ul> </li> <li>• Intervention characteristics               <ul style="list-style-type: none"> <li>• Duration</li> <li>• Completion</li> <li>• Ethnicity match (tbc)</li> <li>• Site as proxy for Oranga Tamariki social work practice (tbc)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Mother’s risk score</li> <li>• Mother’s likelihood of completion</li> <li>• Child’s likelihood of a future care experience</li> </ul>

The sample provided by FHT was 203 children who received service between 2002 and 2019. Of the 203 children and mothers, 29 have not yet finished the service. These children/mothers will be included in both the description of demographics and intervention but excluded in analysis of outcomes, as the intervention is not yet finished (at the time of extract).

Most recent visit acted as a proxy for the end of the intervention.

#### D. Limitations

- The cohort studied is 203 mother and child pairs, of which 29 have not completed the intervention. These pairs (29) are not included in some of the analysis.
- Oranga Tamariki follows Ministry of Social Development protocols when registering ethnicity, that is if a mother or child has indicated any Māori whakapapa, the person is considered first Māori. As such, this underrepresents the number of children with Pākehā parents.
- Number of visits, measured in hours, is only accurately captured from 2014 onwards when FHT modified EASI. As such we have 40 valid records with reliable information on “intensity”
- Date of birth captured for both mother and child sometimes differ to CYRAS record however the dates are relatively similar. We have deferred to the date that appears most logical and when both are logical, we have preferred the FHT date as many have been validated with NIH documents
- We define children and mothers as “care experienced”, i.e. ever having a custody order. As such, it is a binary measure. Further nuance such as age at placement, duration of placement, number of placements and type of placements, i.e. whānau or non-kin, may also provide further insight on both risk factors and outcomes
- FHT target group is families with young children (0-5yrs) so results are applicable to this group
- CYRAS data matching did not include CYRAS history for whānau group. This could be done, and results analysed considering the potential impact of intervention on all children in the whānau group
- A control group has not yet been identified and analysed and therefore it is not yet possible to know how the FHT intervention compares to similar interventions. That said, the rate of children going into care after ‘forming a belief’ is known for the 4 sites that the majority of referrals come from. In the final section on outcomes, a comparison is made to the total site cohort and limitations on the analysis discussed



## II. Findings

### A. Demographic profile of clients

#### In summary:

- Sample of 203 mother and children pairs
- Children are 54.7%, NZ Pākehā, 41.9% Māori (inc. Māori/Pacific) and 5.4% Pacific (inc Māori/Pacific) reflecting general care population in Christchurch
- Wide range of age of mother at intervention
- Largely young mothers at time of birth of child (57% <25yrs old)
- Average age of child at start of intervention 0.8yrs; >76% of children were under 1 yr at start of intervention.
- 65% of mothers had a CYRAS history, 45% further action required or FAR, and 27% of mothers had a care history
- 32% of children had previous care experience
- There is a wide range of mother/child risk scores, but all over 15 (range 0-35)
- Māori mums had significantly higher risk scores than NZ Pākehā (ANOVA,  $p < .001$ )
- Mums with children with care experience had higher risk scores (ANOVA  $p < .05$ ). But Māori mums were not more likely to have care experienced children.
- Very young mums at birth of child (<20yrs) had highest number of ROC (6.7), FAR (5.7) and care history. This declines with age group but it still very high for each subsequent age group, with the exception of older mums (>30yrs) (ANOVA  $p < .001$ ).

We'll closely track Māori (b/c of our commitment to reducing disparities), young mums, mums with high ROC, FAR and a care history, mums with high risk scores and children with care experience throughout analysis....

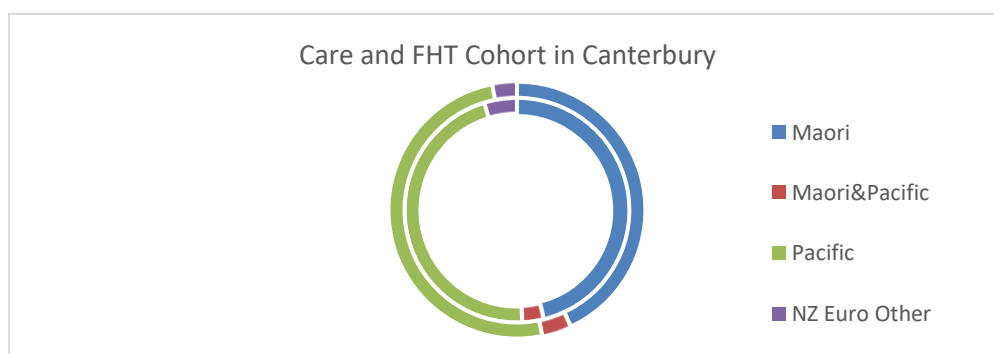
*Note per CYRAS records all caregivers are biological mothers of their children (with 1 exception), thus caregivers will be referred to as mothers.*

#### 1. Mother's ethnicity and child's ethnicity

An overview of ethnicity demonstrates that Māori (51%) and non-Māori (49%) in the sample are roughly equivalent in number. Note the difference in ethnicity for mother and child is reflective of the approach of privileging Māori ethnicity when the child is of mixed whakapapa. Importantly, the sample is broadly representative of the 'children in custody' cohort in Canterbury as at 31 Dec 2018 (see Fig 1). Although non-Māori have a proportionally greater representation in this cohort (53%) than Māori (47%), than in the sample, the differences are unlikely to be significant.



Fig 1. Comparison of general care cohort and FHT clientele referred by Oranga Tamariki



## 2. Mother's age at time of birth and ethnicity

The age of mothers in relation to the child in the sample is spread relatively evenly from 15 through to 43 yrs, although a majority of mothers were 25-and-under at the time of birth of their child. **Table 2** shows the age of mother at the time of birth and her ethnicity. Note any differences are NOT statistically significant, and that there is no correlation between age of mother at birth and her ethnicity.

**Table 2: Sample cohort by age of mother at birth of child and ethnicity**

Mother ethnicity	20 and under	21 to 25	26 to 30	31 +	Total	%
Māori	20	30	11	20	81	39.9
Māori & Pacific	-	-	-	-	-	2.0
NZ Euro Other	32	31	25	23	111	54.7
Pacific	-	-	-	-	7	3.4
<b>Total</b>	<b>53</b>	<b>64</b>	<b>41</b>	<b>45</b>	<b>203*</b>	
<b>%</b>	<b>39.9</b>	<b>2.0</b>	<b>54.7</b>	<b>3.4</b>		

Note that 195 maternal records indicate ethnicity, while the remaining 8 records the child's ethnicity was used as a proxy. This could result in an underestimate of 9 NZ Euro mothers. Counts <5 are suppressed with an "-".

## 3. Mother's age at time of intervention and child's age at time of intervention

**Table 3** shows the ages of tamariki in the sample cohort as these relate to the age of their mother at the time of intervention. There are no statistically significant differences.

**Table 3: Sample cohort by age of child and mother at start of intervention**

Age of mother at start of intervention	Age of child at start of intervention					Total	%
	0	1	2	3	4		
20 and under	13	4	-	-	-	17	<b>8.4</b>
20 to 25	33	12	6	8	-	60	<b>29.6</b>
25 to 30	32	11	9	6	-	59	<b>29.1</b>
30 +	36	14	9	7	-	67	<b>33.0</b>
<b>Grand Total</b>	<b>114</b>	<b>41</b>	<b>24</b>	<b>21</b>	<b>3</b>	<b>203</b>	
<b>%</b>	<b>56.2</b>	<b>20.2</b>	<b>11.8</b>	<b>10.3</b>	<b>1.5</b>		

Similarly, with regards to mother's age at time of intervention and ethnicity (not shown), there are no significant differences.

#### 4. Child's care history, gender and ethnicity

Of the sample cohort, 66 (33%) were 'care experienced' (having previously been in the custody of the Chief Executive) before the intervention began, while a smaller proportion (12%) were considered to be in an active placement with Oranga Tamariki on the date the intervention started (Table 5).

**Table 5: Child's pre- and post-intervention placement history**

	Prior to start of intervention	At start of intervention	# tamariki	%
1	No	No	137	77%
3	Yes	No	42	21%
6	Yes	Yes	24	12%
7	Total		203	100%
<b>Does not equal 100% due to rounding</b>				

No significant difference was detected when disaggregating pre-intervention care experience by gender (Table 6).

**Table 6: Sample cohort by gender of child and child's pre-intervention care experience**

Child's gender	Child's pre-intervention care experience			Total	%
	N	Y			
Male	75	37		112	55.2
Female	62	29		91	44.8
Grand Total	137	66		203	
%	67.5	32.5			

There is no statistically significant difference in ethnicity and likelihood of a pre-intervention care experience (Table 7). There is a strong trend towards Pacific and Māori/Pacific being less likely to have pre-intervention care experience, but as the sample size is so small this difference is not statistically significant.

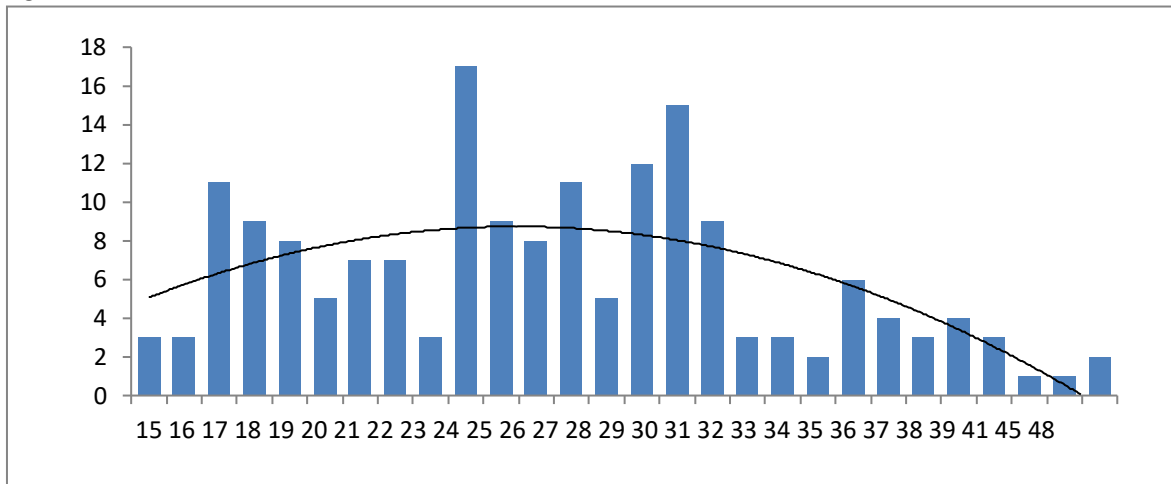
**Table 7: Sample cohort by ethnicity of child and child's pre-intervention care experience**

Child's ethnicity	Child's pre-intervention care experience			Total	%
	N	Y			
Pacific	8	-		9	4.4
Māori/Pacific	-	-		6	3.0
NZ Pākehā	57	33		90	44.3
Māori	67	31		98	48.3
Grand Total	137	66		203	
%	67.5	32.5			

#### 5. Mother's risk score at start of intervention

The risk score is a measure applied to each caregiver/child pair who enters the FHT service. This score is compiled from the results of a bespoke survey given to each primary caregiver that begins the intervention. Fig 3 (below) shows the distribution of individual risk scores. It demonstrates a typical distribution, although there are clusters of scores of 17, 18, 24, and 30. However the 'bumps' are not statistically significant. Note there are no scores less than 15 as the programme targets relatively complex cases with multiple issues, such as experience of violence, mental health issues, criminality, drug and alcohol abuse, etc.

**Fig 3: Distribution of risk scores, all mothers**



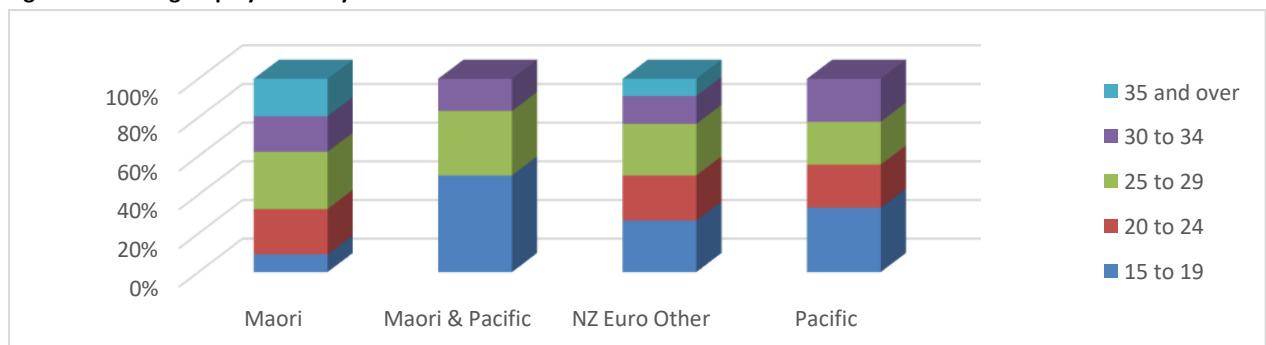
The risk scores tend to group toward the lower end of the range, and more than half are grouped between 20 and 29 (Table 8).

**Table 8: Risk Score Summary**

Risk Group	#	%
15 to 19	39	19.2
20 to 24	46	22.7
25 to 29	57	28.0
30 to 34	34	16.7
35 and over	27	13.3
<b>Total</b>	<b>203</b>	

**Fig 4** (below) indicates that Māori, proportionally, trend towards higher risk scores than non-Māori. This difference is statistically significant (ANOVA,  $p < .001$ ). Individualised surveys were not available to this analysis, so it was not possible at this stage to understand the drivers behind this, with the exception of mother and child’s care history.

**Fig 4: Risk score group by ethnicity**



There is a statistically significant difference in risk scores and her child’s care history pre-intervention (ANOVA,  $p < .05$ ) (Table 9). However, this is likely to be because the risk assessment includes child’s care experience as a factor. Whereas there is no significant difference in risk score and mother’s care history. *If this is because mother’s care history is not considered in the risk assessment, given the correlation between mother’s care history and child’s post-intervention likelihood of care, it may be a good idea to include mother’s care history in the risk assessment.*

**Table 9. Child's care history and mother's risk score**

Child's care hx	#	Mother's avg risk score	
		Mean	Stdev
No	137	25.6	6.4
Yes	66	27.9	7.0
		26.8	
Mother's care hx			
No	149	26.1	6.5
Yes	54	27.0	7.2
		26.3	

There appears to be a relationship between a mother's care history and the likelihood of her child having a care history prior to the intervention, however the result is not statistically significant (Table 10). Nonetheless given the trend, we will continue to consider mother's care history as a risk factor for future outcomes. Fifty-four mothers (54 or 26.6%) had placement experience, with an average of 24 months in care, with 15 mothers (28%) experiencing more than 24 months in care.

**Table 10. Mother's care history and child's pre-intervention care history**

Maternal care hx	Child's pre-intervention care hx			
	N	Y	Total	%
No	104	45	149	<b>73.4</b>
Yes	33	21	54	<b>26.6</b>
<b>Grand Total</b>	<b>137</b>	<b>66</b>	<b>203</b>	
<b>%</b>	<b>67.5</b>	<b>32.5</b>		

Finally, it proves relevant to look at a mother's age at time of birth and her care history, both her likelihood of having a care placement as well as the number of reports of concern (ROC), specifically those categorised as further action required (FAR) (Table 11). The younger the mother was at the birth of her child the more likely she was to have a higher number of ROC, FAR and at least one care placement (ANOVA,  $p < .001$ ). *This proves particularly relevant as we shall see that the children of younger mothers are slightly less likely to complete the intervention and their children are significantly more likely to have a care experience post-intervention.*

**Table 11. Age of mother at birth of child and subsequent ROC, FAR and care history**

Age of mother at birth	ROC Avg#	FAR Avg#	Maternal care hx	Total	%
20 and under	6.7	5.7	43%	17	<b>8.4</b>
20 to 25	4.4	3.7	28%	60	<b>29.6</b>
25 to 30	3.0	2.6	22%	59	<b>29.1</b>
30 +	0.9	0.8	9%	67	<b>33.0</b>
<b>Average</b>	<b>3.9</b>	<b>3.3</b>	<b>27%</b>	<b>203</b>	

## B. Characteristics of Intervention

In summary,

- Duration is on average 712 days (2yrs), <10% less than 82 days, >25% more than 3yrs.
- The sample cohort with reliable data on hours spent with client is relatively small (40 clients) - on average, 62 hours over the course of 383 days. However, this does not tell us the relative intensity over time.
- Twenty-nine (29) out of cohort of 203 have not finished yet and are therefore excluded from further analysis leaving 174.
- Thirty-seven per cent (37%) of the cohort completed the intervention (including subgroups of early graduation, graduation and 'service not needed' (unofficial graduation)
- Forty-one per cent (41%) did not complete the intervention due to non-compliance, refusal of service (8), child taken into kin care or custody)
- Another 21% did not complete but had other reasons for leaving the intervention, largely moving away (18% assuming you are talking re the 174).
- The cohort who completed had a longer duration of service (average 2.8yrs) vs. those that did not complete (1.5yrs) (ANOVA  $p < .001$ ).
- Those that did not complete due to inability to create a safe home for their child, were more likely to incomplete within 3-6 months of starting the intervention ( $p < .001$ ).
- Slightly younger mothers are more likely to not complete programme (ANOVA  $p < .01$ ).
- Mums with children with a care history are 2.8 times more likely to incomplete than mums w children no care history (OR,  $p < .01$ )
- Mums who don't complete had significantly higher ROC numbers when they were young (>5 ROC, ANOVA  $p < .001$ ). The trend is strong but not statistically significant for higher FAR numbers and mum's care history.
- There was no statistically significant relationship between ethnicity, risk scores and likelihood of completion.

### 1. Start year of intervention

Whilst there are 203 pairs in the sample 177 (87%) started in the 10 years 2007 to 2016 inclusive. Of those that have started later (e.g. 26 after >2016), 29 are not yet completed (Table 12).

**Table 12: Sample cohort by year of start of intervention**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
#	1	2	2	5	2	11	15	11	21	22	26	17	19	23	12	7	7	203
%	0%	1%	1%	2%	1%	5%	7%	5%	10%	11%	13%	8%	9%	11%	6%	3%	3%	

## 2. Referral site

The site noted here is not necessarily the referral site but rather the site that last held the case in question. The 14% “other” reflects to a certain extent the number of the cohort that ‘moved away’ over the course of the intervention (18%) (Table 13).

**Table 13. Sites holding the case at time of data pull**

Site	#	%
Christchurch East	28	14%
Christchurch West	43	21%
Papanui	53	26%
Rangiora	6	3%
South Canterbury	9	4%
Sydenham	35	17%
Other South Island	8	4%
Other	21	10%
<b>Grand Total</b>	<b>203</b>	<b>100%</b>

“Other” includes sites as far north as Mangere, and as far south as Invercargill. There are no more than 4 cases per site, and as such they are grouped in this way. Later given sample size, we will refer to results only from Christchurch East, West, Papanui and Sydenham.

## 3. FHT social worker

Over the course of the sample, 202 clients worked with 14 social workers (Table 14 suppressed). Sixty-eight percent (68%) were an ethnic match with their client.

It is relevant to note that FHT ‘matched’ clients and social workers not only based on a social workers capacity to work intensely with a client, i.e. social workers had a mixed caseload with some “high intensity” and “low intensity” cases, but also on the FHT social worker’s ability to work with Oranga Tamariki (or CYFS at the time).

## 4. Distribution and average duration of intervention

The average duration of service is 712 days or nearly 2 years.

**Table 15. Duration of service, includes those not finished**

Months’ duration	0 to 3	3+ to 6	6+ to 12	12+ to 24	24+ to 36	36+	Total
<b>Total</b>	<b>27</b>	<b>19</b>	<b>32</b>	<b>45</b>	<b>29</b>	<b>51</b>	<b>203</b>
<b>%</b>	<b>13%</b>	<b>9%</b>	<b>16%</b>	<b>22%</b>	<b>14%</b>	<b>25%</b>	

### a) *Distribution and average number of hours of intervention*

FHT began robust recording of hours spent with clients in 2014. Of the total sample (203), we have an accurate reflection of hours visited for 89 clients. For these clients the average number of hours spent with the social worker is 101 hours. Of the 89, 29 have not yet completed the intervention. Of those that have left the service (graduated or otherwise, and have the majority of their hours recorded after 2014), the average duration was 86 hrs (60 clients).

## 5. Estimation of 'intensity' (visits/duration)

It is possible to estimate intensity only for those with reliable registration of hours and who have left the service (n = 40). Of these the average number of hours was 63 over a period of 383 days or on average 1.15 hours per week. There is no significant difference for those that graduated (see leaving reason below). In general, it is difficult, if not impossible, to get a sense of 'intensity' with the existing data given its small sample size.

## 6. Completion rates

For the following statistics, those mothers who have not yet completed service (14%) are taken out of the percentages. Of the multiple reasons for ending service, the aggregate of 'early graduation', 'graduation' and 'service no longer required' comprises 37%. Similar to IDI analysis of the "intensive intervention" cohort, the population can be transient and 'move outside the region' (17.8%), and other reasons (total 21% inclusive of 'move'). Forty one per cent (41%) do not complete for reasons related to the intervention not achieving its goals, e.g. refused service, non-compliance, goals not achieved, child going into kin care and child going into custody of the CE. See Table 17 for details. Note values below 5 have been suppressed, represented by "-".

Table 17: Leaving Reason

Leaving Reason	Total	%
0. Not completed yet	29	(14.3%)
1. Early graduation (<2yrs)	14	8.0%
2. Graduate / Goals Achieved	36	20.7%
3. Service no longer needed	15	8.6%
4. Moved outside the region	31	17.8%
5. Duplication of services	-	1.1%
6. Primary caregiver died	-	0.6%
7. Target child died of natural causes	-	0.6%
8. Transferred to another NGO	-	1.1%
9. Refused services	8	4.6%
10. Goals not achieved	7	4.0%
10. Staff safety reasons	-	0.6%
11. Non-Compliant	10	5.7%
12. Kincare-service not needed	23	13.2%
13. Target child in CYF care	23	13.2%
<b>Grand Total</b>	<b>203</b>	

Of those that participate for less than 6 months (n=41), more than half were more likely to have not completed the service due to either being taken into care/kin care (otherwise not able to address care and protection issues while the child remains at home) or moving away (Anova, p<.001).

## 7. Leaving reason group

Given several small samples (e.g. staff safety reasons), it is proposed to group reasons into similar categories, based on the likelihood of similar characteristic of cohort and participation in the intervention (which we will see later also correlates with the likelihood of positive outcomes). **Table 18** reflects the rationale of the approach, e.g. 85% of those participating for 3 months or less either refused service, did not achieve goals, or their children went into either kin care or custody of the CE, or in the second instance moved away. Similarly, 71% of those participating for more than 36 months



have either completed or not yet finished. The differences at the two ends of the spectrum is statistically significant (ANOVA and Chi-square,  $p < .001$ ).

It is also important to note that 'early graduation' is on average 2yrs, while 'graduation' is on average 4 yrs, hence the quite significant duration of a 'successful' service.

**Table 18. Successfully completed or not completed and duration of service**

Months' duration	0 to 3	3+ to 6	6+ to 12	12+ to 24	24+ to 36	36+	Total
Not completed	59%	53%	38%	29%	34%	22%	35%
Other (e.g. moved)	26%	26%	28%	22%	7%	8%	18%
Completed	7%	5%	25%	38%	31%	55%	32%
Not yet finished	7%	16%	9%	11%	28%	16%	14%
<b>Grand Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

## 8. Characteristics of those more likely to complete

Those client characteristics of those more likely to complete the intervention include:

- Mothers with fewer reports of concern (ROC<5) as a child/young person (ANOVA,  $p < .05$ )
- Older mothers at time of intervention (ANOVA,  $p < .02$ )
- Mothers with children with no care history (2.8 times more likely to complete the intervention,  $p < .01$ )

The following factors had no relationship with likelihood of completion:

- Ethnicity
- Mother's care history
- Mother's risk score

## C. Outcomes and multivariate analysis

### In summary

- Post-intervention, 72% have no further care episode, of these 85% had no care experience prior to intervention.
- Children who are care experienced prior to “intensive intervention” are 19x more likely to be in care post-intervention (OR 19.1,  $p < .0001$ )
- High risk scores ( $>25$ ) correlate significantly with care post-intervention (ANOVA  $p < .01$ )
- High mum FAR scores ( $>2.5$ ) correlate significantly with care post-intervention (ANOVA,  $p < .001$ )
- Children of mums who successfully complete “intensive intervention” are 3.5x more likely to not have a care episode again (OR 3.5,  $p < .0015$ )
- No sig difference in outcomes for ethnicity, duration, etc. Further data analysis is necessary to determine impact of ‘intensity’ or hours spent with client.
- Similar trends for ROC, FAR and NFA in that they decline pre and post-intervention. The number of FAR appear to decline at a more significant rate, implying a decrease in severity of ROC post-intervention.
- Care episodes post-intervention,  $r$ -square = 0.41, variables that correlate to increased likelihood of care post-intervention are child’s prior experience of care, mother’s FAR experience, and not completing the “intensive intervention”. It seems younger more traumatised mums, with care experienced babes are the least likely to benefit at this point, from “intensive intervention”. The results appear to make the case for a specific approach when working with young traumatised mums.
- That said, just looking at the small cohort of children with pre-intervention care experience ( $n=46$ ) when their mothers successfully complete the intervention, their children are 5 times more likely to stay out of care (OR 5.15,  $p < .02$ )
- The fact that outcomes are significantly different for those completing the intervention implies the intervention makes a difference, and potentially even more so for those with care experience prior to intervention. However, some attempt was made to compare likelihood of going into care with the intervention cohort to the total population at the referring site. It was difficult to interpret and compare the results from the site (percent of children going to care from FGC), not least as the characteristics of the cohort were not known (e.g. pre-FGC care experience) , as well as the rates and therefore the practice is likely to be very different).

### 1. Care experience post-intervention

The majority of tamariki remain out of care post-intervention (70%). While there are slight differences for Māori and Pākehā, the differences are not statistically significant (Table 19).

**Table 19. Care experience post-intervention, by ethnicity**

Ethnicity	No care	Care	Total	%
Māori	54 (65%)	29 (35%)	83	47.8%
Māori & Pacific	4 (66%)	2 (34%)	6	3.5%

NZ Pākehā	55 (72%)	21(28%)	76	43.8%
Pacific	8 (89%)	- (11%)	9	5.2%
<b>Grand Total</b>	<b>121 (69.5%)</b>	<b>53 (30.5%)</b>	<b>174</b>	
<b>%</b>	<b>70%</b>	<b>30%</b>		

## 2. Care experience over time post-intervention

When looking at the post-intervention timeframe, note that tamariki in the sample have experienced differing lengths of time post-intervention. Because of this, many more tamariki will have passed, for example, the Year 1 post-intervention milestone than the Year 2 milestone (Table 20).

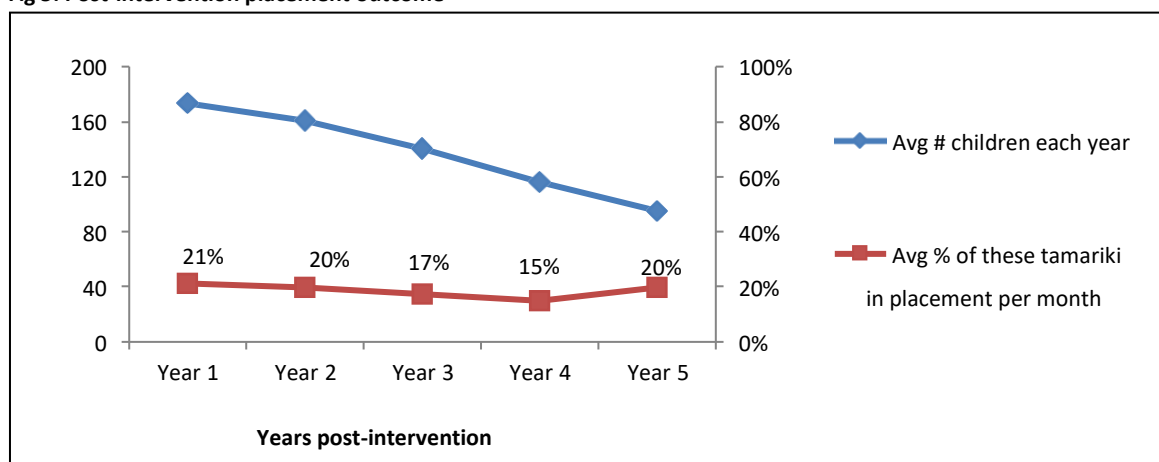
Table 20. Sample size of cohort by number of months post-intervention

post month #	6	12	18	24	30	36	42	48	54	60
# tamariki	174	168	163	151	143	124	119	105	95	89

Therefore, to compare like to like the calculations in this section are expressed *as percentages of tamariki who are eligible to be counted* at a certain point.

Fig 5 (below) shows the monthly average of the proportion of tamariki-in-care across an entire year. In the 5 years post-intervention, on average, 20% of the tamariki in our sample are in placement in any given month. This proportion is relatively consistent across 5 years post-intervention, even as the number of eligible tamariki declines.

Fig 5: Post-intervention placement outcome

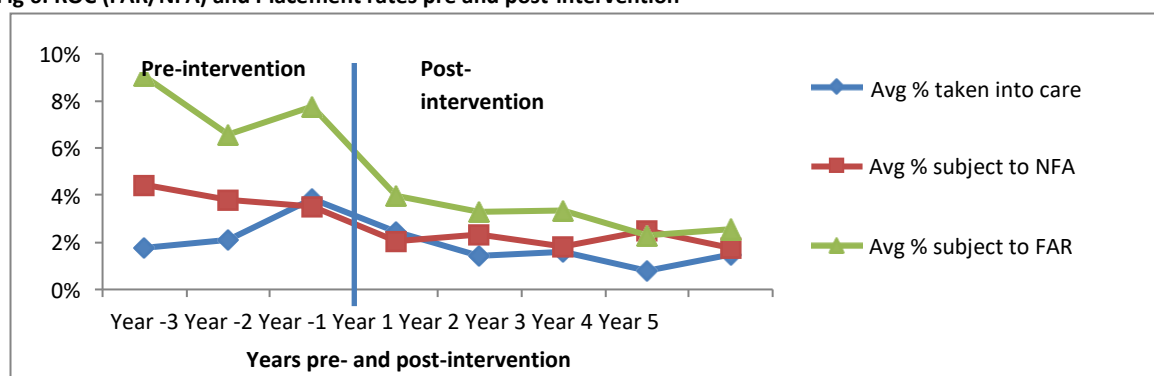


## 3. CYRAS reports over time post-intervention

ROC volumes were analysed in terms of records for both those categorised Further Action Required (FAR) and No Further Action (NFA). **Figure 6** shows the trend for these from a period of 3 years prior to the end of the intervention (Year minus 3) to 5 years after the end of the intervention (Year 5).

When analysing the rates of ROC, whether they are FAR or NFA, the trend is a decline in instances. The decline is more pronounced for FAR, implying that in addition to the overall reduction in ROC, the severity of ROC or FAR are also reduced.

**Fig 6: ROC (FAR/NFA) and Placement rates pre and post-intervention**



#### 4. Care experience post-intervention by completion status

While overall the results are relatively positive, the results for some of the cohort are better than others. Mothers who complete the intervention appear to have fewer placements post-intervention (Table 21).

**Table 21. The relationship between completion and post-intervention care experience**

Completion	Post-intervention care experience		Total	%
	No	Yes		
No	40 (55%)	32 (45%)	72	52.6%
Yes	53 (82%)	12 (18%)	65	47.7%
<b>Grand Total</b>	<b>93</b>	<b>44</b>	<b>137</b>	
<b>%</b>	<b>67.9%</b>	<b>32.1%</b>		

**Excludes both 'other' reasons for not completing and those that have not finished.**

Indeed, the relationship between completing the intervention and no further care experience post-intervention is strong (ANOVA,  $p < .001$ ). The odds of a mother completing the intervention and her child *not* coming into care post-intervention are 3.5 times higher as those who did *not* complete the intervention (OR 3.5,  $p < .0015$ ).

While the rate of those not entering care for those who completed is 81%, for the largest proportion of 'other' – moving away – the rate of not entering care was also 78% - not statistically significantly different from completion, but statistically significant from incomplete. This raises the issue of if a) moving away was enough to resolve some of the care and protection issues, e.g. leaving a violent partner, moving closer to whānau supports, etc, OR if the child was 'lost to view' of Oranga Tamariki as no further report of concern was made.

#### 5. Care experience post-intervention by cohort

Another strong predictor of post-intervention success appears to be the child's pre-intervention care history. When the cohort is split between (A) tamariki with a care history prior to intervention (refer to previous Table 22 and Table 23 below) and (B) tamariki with no care history, there is a statistically significant difference.

**Table 22: Child’s pre- and post-intervention placement history**

	Prior to start of intervention	At start of intervention	After most recent visit	# tamariki at Start of intervention	Excluding those that have not finished
1	No	No	No	124 (61%)	103 (57%)
2	No	No	Yes	13 (6%)	13 (7%)
3	Yes	No	No	9 (4%)	38 (22%)
4	Yes	No	Yes	33 (16%)	8 (5%)
5	Yes	Yes	No	13 (6%)	10 (6%)
6	Yes	Yes	Yes	11 (5%)	10 (6%)
7	Total			203	174

Does not equal 100% due to rounding

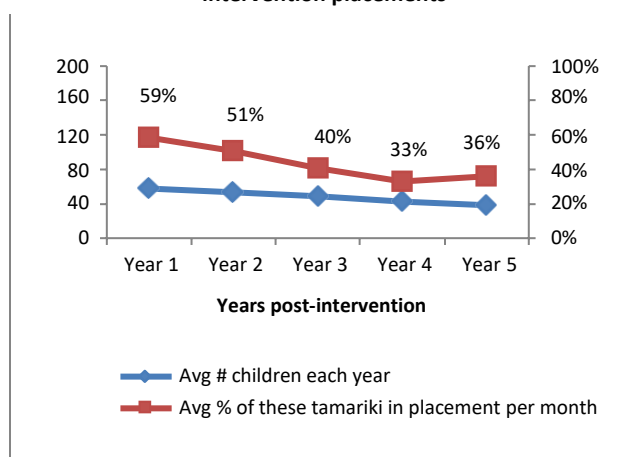
Indeed, tamariki with care history are 19 times more likely to end up in care post-intervention than tamariki with no care history (OR 19.1, Chi-square 71.75,  $p < .0001$ ). (See caveat above when combining both care history and completion below).

**Table 23. The relationship between child’s pre and post-intervention care history**

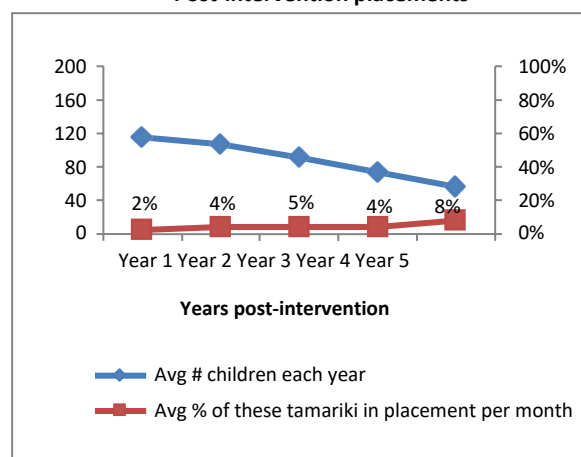
Care history	Post-intervention care experience			
	No	Yes	Total	%
No	124	22	146	71.9%
Yes	13	44	57	28.1%
Grand Total	137	66	174	
%	67.5%	32.5%		

This difference is clearly seen in graphic representations and remains the case over time (Fig 7 and 8)

**Fig 7: Proportion of tamariki with (A) care history to (X) Post-intervention placements**



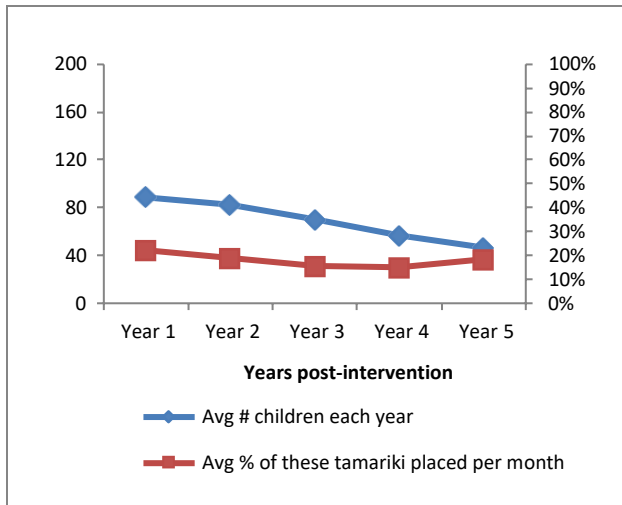
**Fig 8: Proportion of tamariki with (B) no care history to (X) Post-intervention placements**



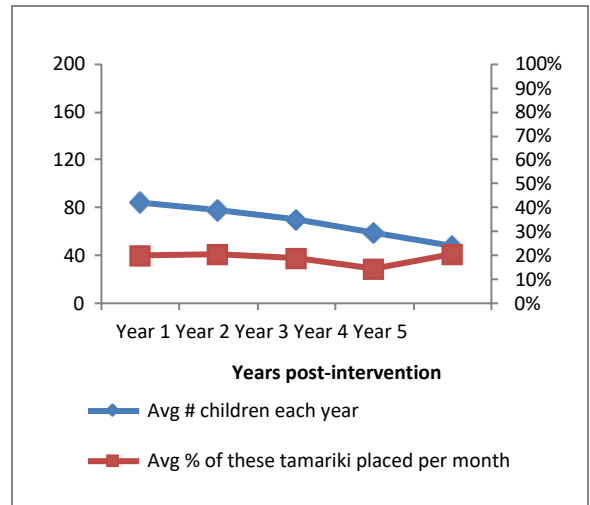
Despite this, the downward post-intervention trend for (A) pre-intervention care experienced tamariki suggests that nonetheless over time this cohort becomes less and less likely to enter care. While there is a slight upward trend in Year 4 and 5 for both cohorts this trend is not statistically significant.

Regarding ethnicity, the time series view shows little difference between Māori and non-Māori. In fact there is no statistically significant difference.

**Fig 9: Proportion of tamariki Māori to (X) Post-intervention placements**



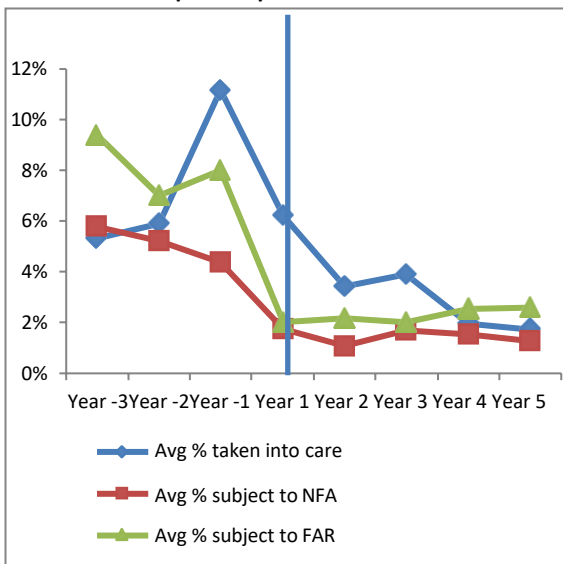
**Fig 10: Proportion of tamariki non-Māori to (X) Post-intervention placements**



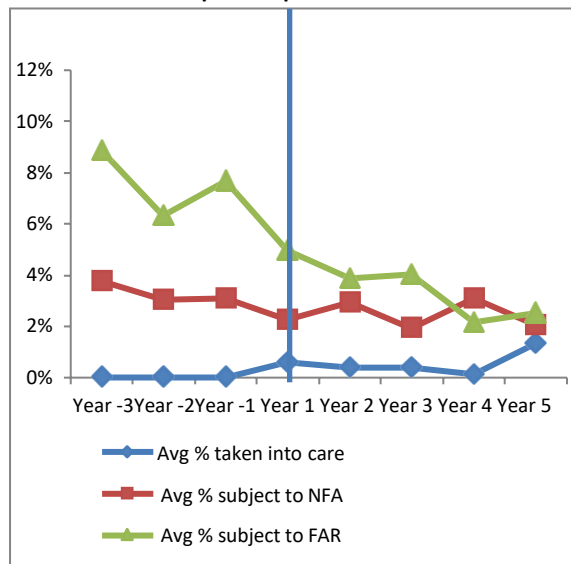
**6. CYRAS reports post-intervention by cohort**

Similar to placement rates for children with and without a care history pre-intervention, the proportion of tamariki with ROC, FAR and NFA also shows a downward trend post-intervention, consistent with the analysis demonstrated by Figures 5-10.

**Fig 11: Pre-intervention (A) care history and CYRAS reports pre and post intervention**



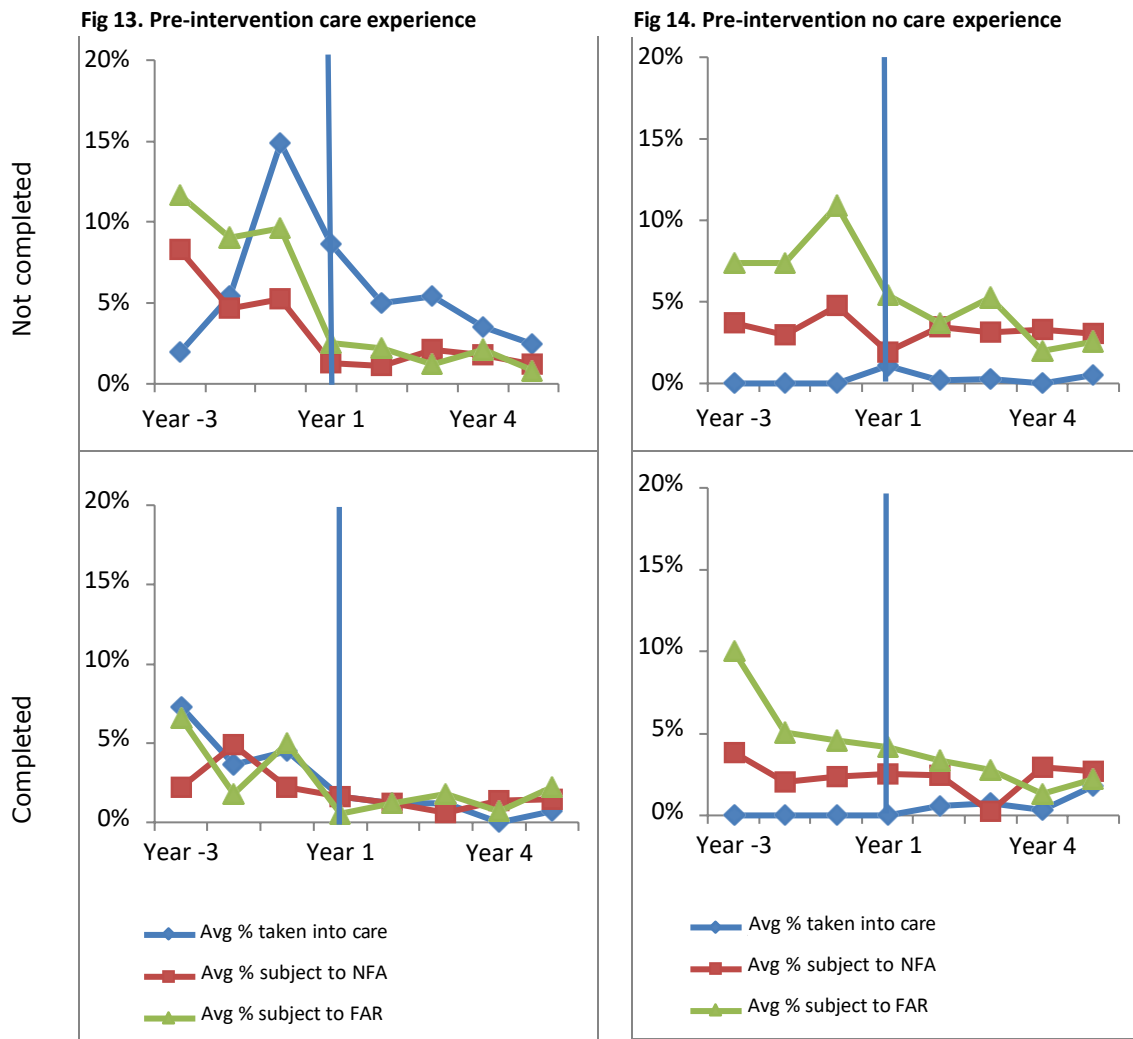
**Fig 12: Pre-intervention (B) no care history and CYRAS reports pre and post intervention**



- **CYRAS reports post intervention by both pre intervention care experience and completion status**

The charts below indicate that completing the intervention is particularly important for those with pre-intervention care experience, despite this group having poorer over all outcomes. In fact, when looking at this small cohort (48 tamariki), those mothers successfully completing the intervention, their children are 5 times more likely to stay out of care (Figures 13 and 14, Table 24, OR 5.15, p<.02)

Note legend is the same as above (blue=placement rate, red=NFA rate, and green=FAR rate)



**Table 24. The relationship between completion and post-intervention care experience for those with prior care experience only**

Completion	Post-intervention care experience		Total	%
	No	Yes		
No	6 (18%)	27 (82%)	33	68.7%
Yes	8 (53%)	7 (47%)	15	31.2%
<b>Grand Total</b>	<b>14</b>	<b>34</b>	<b>48</b>	
<b>%</b>	<b>29.2%</b>	<b>70.8%</b>		

Excludes both 'other' reasons for not completing and those that have not finished.

The multivariate analysis in the next section analyses which characteristics of either the cohort, or the intervention are most likely to correlate with outcomes.



## 7. Risks scores and likelihood of post-intervention care experience

While there is a strong trend toward poorer outcomes for mothers with higher risk scores and the ANOVA results are significant ( $p < .001$ ). The correlation with outcomes disappears when prior care experience is also considered.

**Table 25. Risk score group and likelihood of care experience post-intervention**

Risk score group	#	No care experience post-intervention
15-19	34	85%
20-24	39	78%
25-29	57	67%
30-34	32	62%
35 and over	24	59%

## 8. Mother's FAR numbers and likelihood of post-intervention care experience

There is a strong trend toward poorer outcomes for mothers with higher historical FAR records (ANOVA results are significant ( $p < .001$ )). This correlation remains in multivariate analysis, indicative of perhaps the level of traumas mothers are subject to.

**Table 26. Risk score group and likelihood of care experience post-intervention**

Care experience post-intervention	#	Average
No	121	2.5
Yes	53	4.8
Total	172	3.3

## 9. Social worker and likelihood of care post-intervention

In general, there is too much variation to tell much about an individual's success at working with clients, and differences below are not statistically different from the mean.

## 10. Social worker and client ethnic 'match' and outcomes

Ethnicity of social worker does not appear to have any relationship with the likelihood of both completing the intervention and post-intervention care experience, with the exception of Māori social workers having particularly excellent success with Pākehā clients. However, we will see in the multivariate analysis that this not a significant factor and the matching is likely to be co-correlating with another factor (Table 28).

**Table 28. Ethnic match: social worker and client and outcomes**

Client Ethnicity	Social Worker	#	% of successful completion rates	% of tamariki with NO post-intervention care experience
NZ Pākehā	Māori	14	30%	100%
	NZ Pākehā	76	40%	69%
Māori	NZ Pākehā	44	27%	75%
	Māori	53	23%	64%
			38%	70%

## 11. Multivariate Analysis

Multivariate analysis generally follows univariate analysis or ANOVA as has been done previously. To recap, those outcomes that we are interested in are (refer to previous description in Table 1). Each of these variables were run in a multivariate stepwise regression which tests for correlation but also co-correlation thus putting in relative degrees of influence the factor being assessed.

## 12. Factors that strongly correlate with mother's risk score

Having a child with a pre-intervention care history (positive correlation, +) and being Māori (+) correlates with higher risks scores, in that order, however the explanatory value is less than 8% (r-square=0.778)

## 13. Factors that strongly correlate with mother's likelihood of completion

Having a child with a pre-intervention care history (-), being in care at the start of the intervention (-) and duration (+) correlates with likelihood of successful completion of intervention. These factors have 23% of explanatory value (r-square=0.229)

## 14. Factors that strongly correlate with child's likelihood of a future care experience

Having a child with a pre-intervention care history (+), mother's FAR numbers as a child/young person (+), mother's age (-), i.e. older age correlates with decreased likelihood of care), and vice versa), and successful completion (-) correlate with likelihood of a future care experience, in that order. These factors account for 41% of the explanatory value (r-square=.411).

Pre-care history of child (-), mother's CYRAS history (-), successful completion of intervention (+) are among the factors that seem to overwhelming influence outcomes, while other factors, e.g. age and gender of child (noting that all children are under 5yrs, and siblings are not accounted for here), ethnicity of mother in most cases (exception of risk score), risk score, ethnic match of mother to social

## 15. Care experience post-intervention by site

While we do not have a control cohort, we can compare these outcomes with the prevailing site-specific rates of tamariki coming into care post FGC. Given sample size this is only possible to do for the four sites with over 5 referrals to FHT, Christchurch East and West, Papanui and Sydenham (Table 30).

Tables 30. Prevailing rates of entry to care post FGC per site and FHT results (CYRAS data 03/19)

Ethnicity	Number tamariki in FGC (in last year)	Prevailing rate Entry to care from FGC%	FHT # of clients	FHT clients / % entry to care (since end of intervention)
East	87	63%	28	11%
West	152	27%	43	37%
Papanui	136	24%	53	40%
Sydenham	103	23%	35	22%
<b>Grand Total</b>	<b>478</b>	<b>32%</b>	<b>167</b>	<b>28%</b>

Note there were no statistically significant differences in cohorts referred to FHT from site, e.g. age of mother at birth, age of mother at intervention, care history of mother, or mother's risk score. However, there is a significant difference in tamariki referred to FHT and their care history. While only

11% of tamariki referred from Christchurch East have a care history, 47% of tamariki referred from Papanui have a care history (ANOVA,  $p < .001$ ). As child's care history has a strong correlation with likelihood of future care experience, this may account for the poorer relative outcomes of Papanui clients.

**Table 31. Correlation of pre-intervention care history and outcomes by site**

Site	Number of clients referred to FHT	% with tamariki with care history	Outcomes for tamariki with care history (% care)	Outcomes for tamariki with no care history (% care)
Christchurch East	26	11.5%	33.3%	8.6%
Christchurch West	41	39.0%	87.5%	4.0%
Papanui	53	47.2%	76.0%	7.1%
Sydenham	47	47.9%	50.0%	6.4%
<b>Grand Total</b>	<b>167</b>			

Once accounting for care history, there is no statistically significant difference between sites. So, to correctly make the comparison to prevailing rates we'd need to know of those tamariki going to FGC at each site, what percent had a previous care experience or not, to compare like to like.

#### **Discussion offered from Family Help**

As a result of this study, FHT are interested in ascertaining 'where to now?'. While it is not possible to conduct a randomised control trial, it should be possible to extract a sample of "non-treated" families with similar demographics and experience of Oranga Tamariki from CYRAS and compare outcomes. The methodology used in this study could easily be converted for this purpose. A case-cohort analysis would increase the robustness of this study.