Interdisciplinary Trauma Research Unit

Hospital Responsiveness To Family Violence:

30 Month Follow-Up Evaluation

Te wairere au noa

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TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

HOSPITAL RESPONSIVENESS TO FAMILY VIOLENCE:

30 Month Follow-Up Evaluation

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The evaluation team would like to thank the DHB family violence intervention coordinators, liaisons, and all the others that took part in the site visits. We also give our appreciation to the Ministry of Health family violence project managers, Jo Elvidge and Sue Zimmerman.

Contracted organisation
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Executive Summary

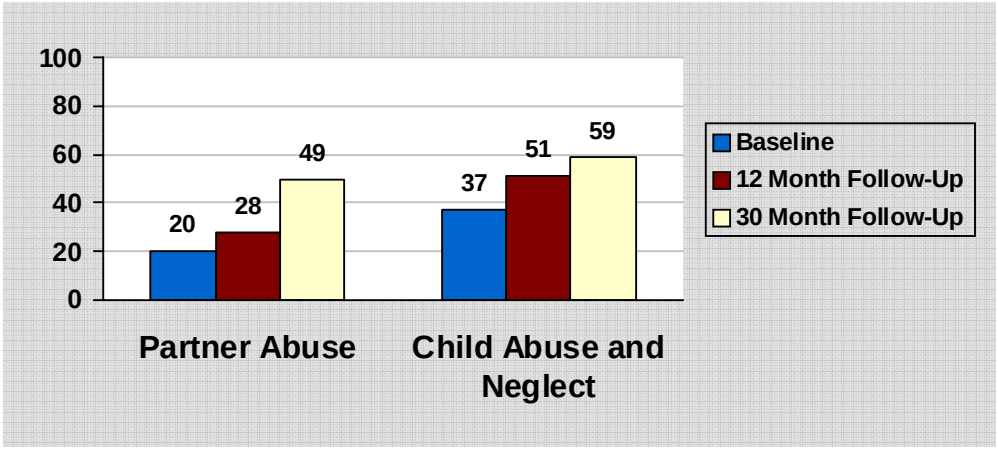
Family violence (FV) is a priority health issue and requires an effective and sustainable health care response. This report is one in a series evaluating health care responsiveness to FV.[1] It presents 30 month follow-up hospital audit findings and compares them to baseline and 12 month audit findings. These quantitative data are one aspect of the overall evaluation,[1-4] and are the result of applying the modified 'Delphi' tool[a] during hospital site visits. They contribute to the nationwide picture of FV healthcare initiatives across Aotearoa New Zealand. The audit data answer the following two questions:

1. How are New Zealand District Health Boards (DHBs) performing in terms of institutional support for family violence prevention?
2. Is institutional change sustained over time?

Results of the 30 month follow-up audit indicate that significant progress continues to be made in programme development for responding to both partner abuse and child abuse and neglect (see Figure 1).

- The median score for partner abuse intervention programmes was 49, an increase of 151% over the 30 months since the baseline audit.
- The median score for child abuse and neglect intervention programmes was 59, an increase of 62% since the baseline audit.
- Collaboration with community agencies, staff training and intervention services are now present across the majority of hospitals for both partner abuse and child abuse and neglect.

Figure 1. Baseline and Follow-up Median Family Violence Programme Scores (n=25)



[a] The 'Delphi' tool included two sections, the first addressed partner abuse programme elements and the second addressed child abuse and neglect programme elements. Scores for each section as well as for domains within the sections range from 0 to 100, with higher numbers indicating greater system development.

While significant improvements have been made, scores continue to reflect intermediate stages of programme implementation. It is a concern that several hospitals have yet to begin developing a system response to family violence, indicated by low scores and the absence of a Family Violence Intervention Coordinator. Trend analysis indicated that having a designated Family Violence Intervention Coordinator, programme maturation and time (audit round) all predicted higher family violence programme scores. With dedicated District Health Board resourcing, family violence programme process indicators are likely to continue steady improvement.

BACKGROUND

Family violence (FV) is recognised to have significant social, economic, and health tolls internationally and in Aotearoa New Zealand.[5-11] The identification of family violence as a preventable public health problem is reflected in health policy documents such as the New Zealand 2000 Health Strategy.[12] In that document "reducing violence in interpersonal relationships, families, schools and communities" was identified as one of 13 priority objectives. Subsequently, the Ministry of Health began the Family Violence Health Intervention Project in 2001. The Project's aim was to support the health sector's development of an evidence-based response to victims of family violence. A more detailed explanation of the Project is included in earlier reports.[13]

The Health Response to Family Violence Evaluation Project has been running alongside the Family Violence Health Intervention Project - recently renamed as the Violence Intervention Programme - since 2003 (see programme logic, Appendix A). This report is one in a series evaluating health care responsiveness to family violence.[1] It presents the 30 month follow-up round of hospital audit findings and compares them to earlier baseline and 12 month follow-up findings.

The longitudinal data contribute to the nationwide picture of family violence healthcare initiatives across Aotearoa New Zealand acute care services. The audit data answer the following two questions:

1. How are New Zealand District Health Boards (DHBs) performing in terms of institutional support for family violence prevention?
2. Is institutional change sustained over time?

METHODS

Setting

The evaluation was conducted nationwide across Aotearoa New Zealand. All 25 acute secondary and tertiary public hospitals from earlier audit rounds (located within the 21 DHBs) were invited to participate in this third (30 month follow-up) audit. Among the 25 hospitals, 22 participated fully, one hospital participated only in the partner abuse programme evaluation, another hospital participated only in the child abuse and neglect programme evaluation and one participated in neither. In addition to the original 25 hospitals, two hospitals were added in this third audit round at their request (see Appendix B). The evaluation project was approved by the Multi-region Ethics Committee (AKY/03/09/218).

Audit Tool

Quantitative audit data were collected applying the modified 'Delphi' tool during hospital site visits. The original *Delphi Instrument for Hospital-Based Domestic Violence Programmes*[14] was developed to monitor primary indicators of hospital family violence programme quality. As described in the baseline report,[1] the

original Delphi was modified for the purpose of this Aotearoa New Zealand evaluation project. The modified Delphi (Partner Abuse and Child Abuse and Neglect) includes performance measures categorised into nine domains for Partner Abuse and eight for Child Abuse and Neglect. The Delphi domains are described in Table 1.

Each tool domain is standardised resulting in a possible score from 0 to 100, with higher scores indicating greater levels of programme development. An overall Delphi score is generated using a scheme where some domains are weighted higher than others (see Appendix C for domain weights).

Table 1. Audit Tool Domains

Domains	Brief Description
Policies & Procedures	Policies and procedures outline the assessment and treatment of family violence victims, mandate routine screening and direct sustainability.
Physical Environment	Attention to the physical environment (posters and brochures) lets patients and visitors know that it is OK to talk about and seek help for family violence.
Cultural Environment	Cultural environment indicators herald recognition of family violence as an important issue for the hospital and maturation of a family violence programme.
Training of Staff	A formal plan should be in place to train hospital staff to identify persons exposed to family violence and how to respond appropriately.
Screening & Safety Assessment	Standardised partner abuse screening and safety assessment instruments are available. Eligible patients are screened for violence.
Documentation	Standardised family violence documentation forms are used with attention to forensic details.
Intervention Services	Intervention checklists are available, with attention to co-occurrence of partner violence and child abuse.
Evaluation Activities	Evaluation activities monitor whether a programme is working efficiently and achieving its goal of system change.
Collaboration	Family violence programmes call for collaboration throughout their processes, from policy and procedure writing to monitoring programme effectiveness. Partnerships within the hospital as well as with external stakeholders such as Women's Refuge are important.

Procedures

Audit procedures for the 30 month site visit mirrored those of the baseline and 12 month site visits as described below:

1. A letter of introduction was sent to each CEO alerting them that the follow-up audit was due.
2. The person identified to act as a FV Liaison (either the Family Violence Intervention Coordinator or the person identified by the manager) was

contacted, after which the general audit process and scheduling of the audit was communicated by e-mail and telephone.

3. Confirmation of the audit date and a detailed checklist of documents that needed to be collated for the audit were sent to the FV Liaison.
4. The FV liaison was asked to coordinate the involvement of others (such as the child protection coordinator) in the site visit as appropriate.
5. A few days prior to the audit, contact was made with the liaison to answer any outstanding questions about the audit.

Follow-up audits were conducted by Jo Adams, a trained member of the research team. Dr Jane Koziol-McLain and Dr Coben participated in scoring dilemmas. Each audit was conducted during a site visit lasting approximately 4 hours.

Along with the hospital FV liaison person, child protection coordinators; social workers; representatives from the paediatric, maternity and emergency wards; as well as hospital management often contributed to the audit.

On completion of each site visit an audit report was provided to the liaison person, usually within two weeks, to confirm the accuracy of the audit report. Once confirmed, the finalised hospital report was sent to the CEO, with a copy sent to the FV liaison.

Timeframe

Baseline hospital audits were conducted between November 2003 and July 2004; 12 month follow-up hospital audits were conducted between November 2004 and July 2005; 30 month follow-up hospital audits began in July 2006. The average time between the baseline and 30 month follow-up audit was 31 months (see Table 2).

Table 2. 30 Month Hospital Audit Schedule

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	TOTAL
Baseline Nov 03–Jul 04	1	3	4	8	5	0	1	1	1	25
12 Month FU Nov 04–Jul 05	1	1	3[a]	8	8	0	0	2	2	25
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
30 Month FU Jul 06-Feb 07	0	0	7	6	5	1	0	3	4[b]	26

[a] Includes one hospital that had baseline scores carried over, and a second that had delayed audit scores imputed.
[b] The final audit was conducted 1 February 2007.

Analysis Plan

Descriptive Analysis

Hospital characteristics and Delphi scores were analysed using SPSS (Version 14). In this report we present the distribution of overall Partner Abuse and Child Abuse and Neglect scores in graphs and tables. Baseline, 12 month and 30 month follow-up scores are presented for individual domain and overall Delphi scores. Box plots are used to examine the distribution of scores (see Appendix C*: How to Interpret Box Plots*). Both domain and overall scores may range from 0-100, with higher scores reflecting a greater level of programme development. The reader should be alerted that both mean (mathematical average) and median (middle) scores are used.

Trend Analysis

We tested whether scores changed significantly (statistically) over time. The 25 hospitals that were included in the baseline audit are the focus of this trend analysis. In cases of missing programme data, previous scores were carried forward based on the knowledge of unchanged Family Violence Intervention Coordinator status or other significant change indicators (see Table 3).

Using SAS (version 9; www.sas.com), repeated measures ANOVA model examined main effects (that is, whether the factor impacted on the audit score) and interactions effects for time (whether the factor had different impacts over time). Interaction effects over time were tested for the following factors: hospital size, rural/urban location, programme maturation, Family Violence Coordinator, Coordinator dual role (with partner abuse and child abuse and neglect programme responsibilities) and Coordinator FTE. The magnitudes and differentials presented utilised the estimated least squares means adjusting for subject, interaction and main effects and standard errors of the estimates.

Table 3. Audit Score Imputing for Trend Analysis

Baseline	• 25 hospitals with PA & CAN
12 Month Follow-Up	• 23 hospitals with PA & CAN • 1 hospital with PA only, had CAN scores carried over • 1 hospital had PA & CAN scores carried over
30 Month Follow-Up	• 22 hospitals with PA & CAN • 1 hospital with CAN, had PA scores carried over • 1 hospital with PA, had CAN scores carried over • 1 hospital had PA & CAN scores carried over

Note: PA=partner abuse programme; CAN=child abuse and neglect programme; two hospitals participating for the first time at the 30 month follow-up audit were not included in the trend analysis.

FINDINGS

Partner Abuse Audit Findings

Partner Abuse Summary

- At 30 month follow-up, the partner abuse programme score ranged from 5 to 95, with 49 being the typical (median) score.
- The median partner abuse programme score increased from 20 at baseline, to 28 at 12 month follow-up, to 49 at 30 month follow-up.
- The 30 month follow-up scores reflect a 78% increase from 12 month follow-up scores and a 151% increase from baseline.
- Five hospitals (20%) achieved the target score of 70.

In Figure 2, box plots display the change in partner abuse scores over time; hospital league tables (anonymised) are provided in Figure 3; and median domain scores over time are provided in Figure 4. Table 4 provides the data supporting the displays/figures. Frequencies for individual partner abuse programme Delphi items are provided in Appendix E.

Figure 2. Overall Partner Abuse Scores: Baseline and Follow-up

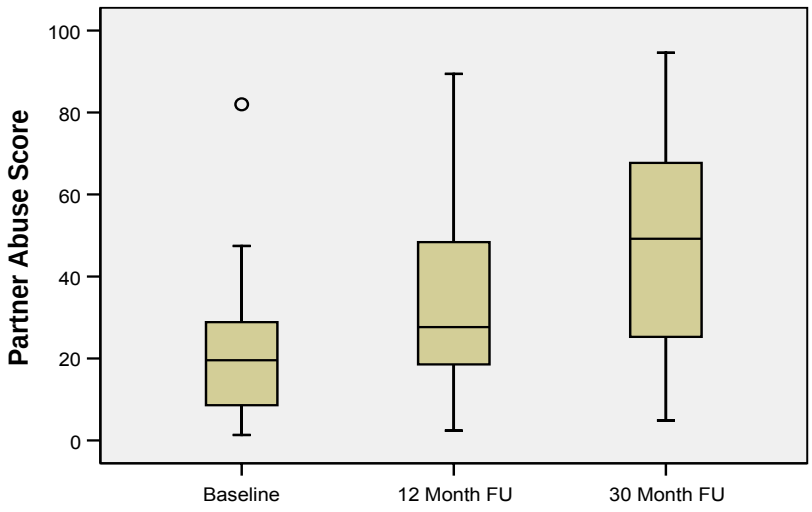
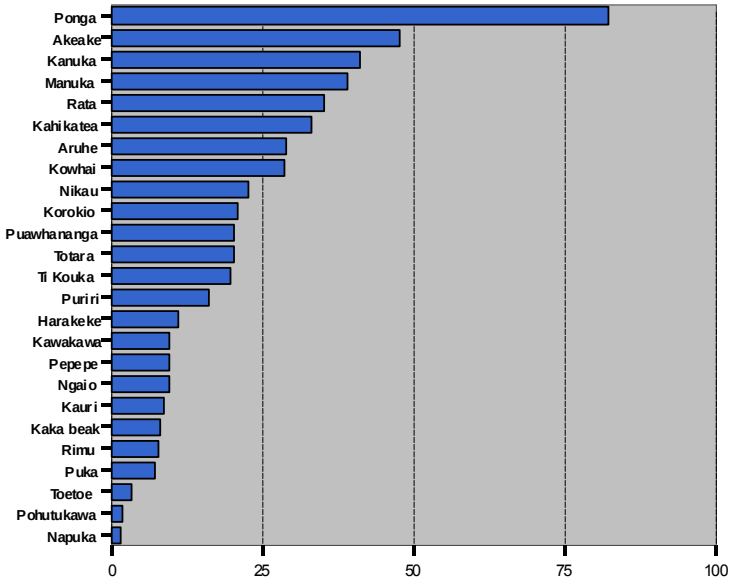
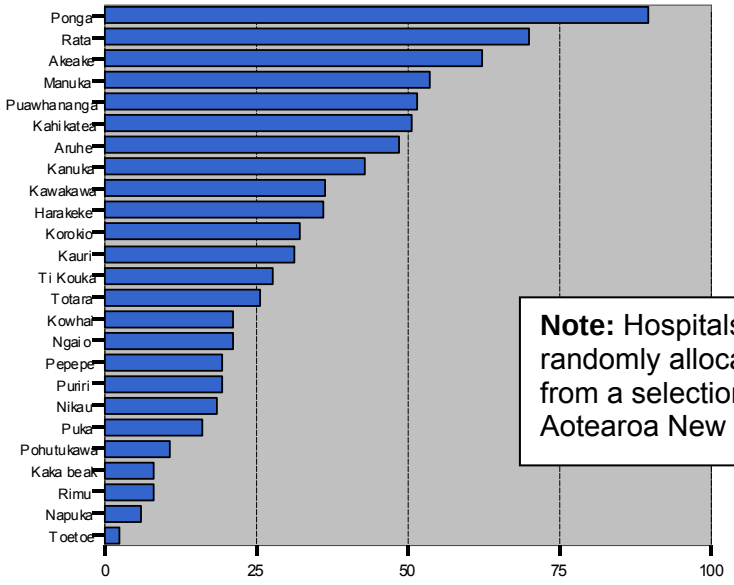


Figure 3. Partner Abuse Intervention Hospital League Tables

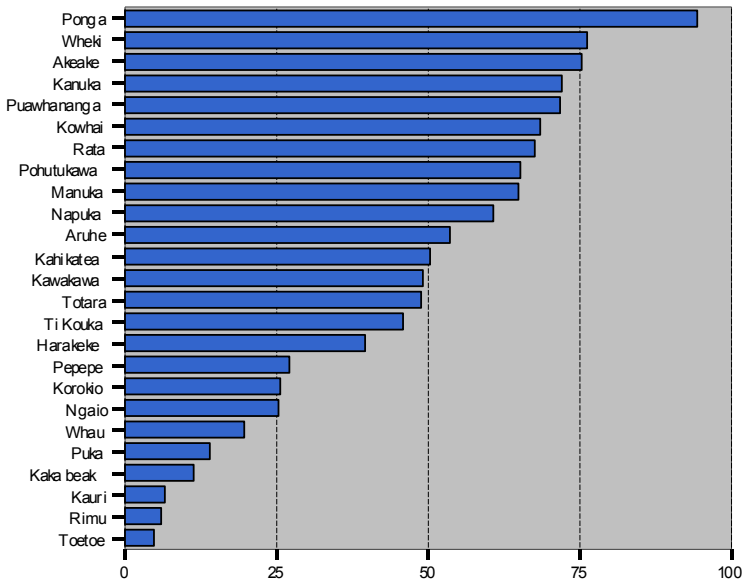


Baseline



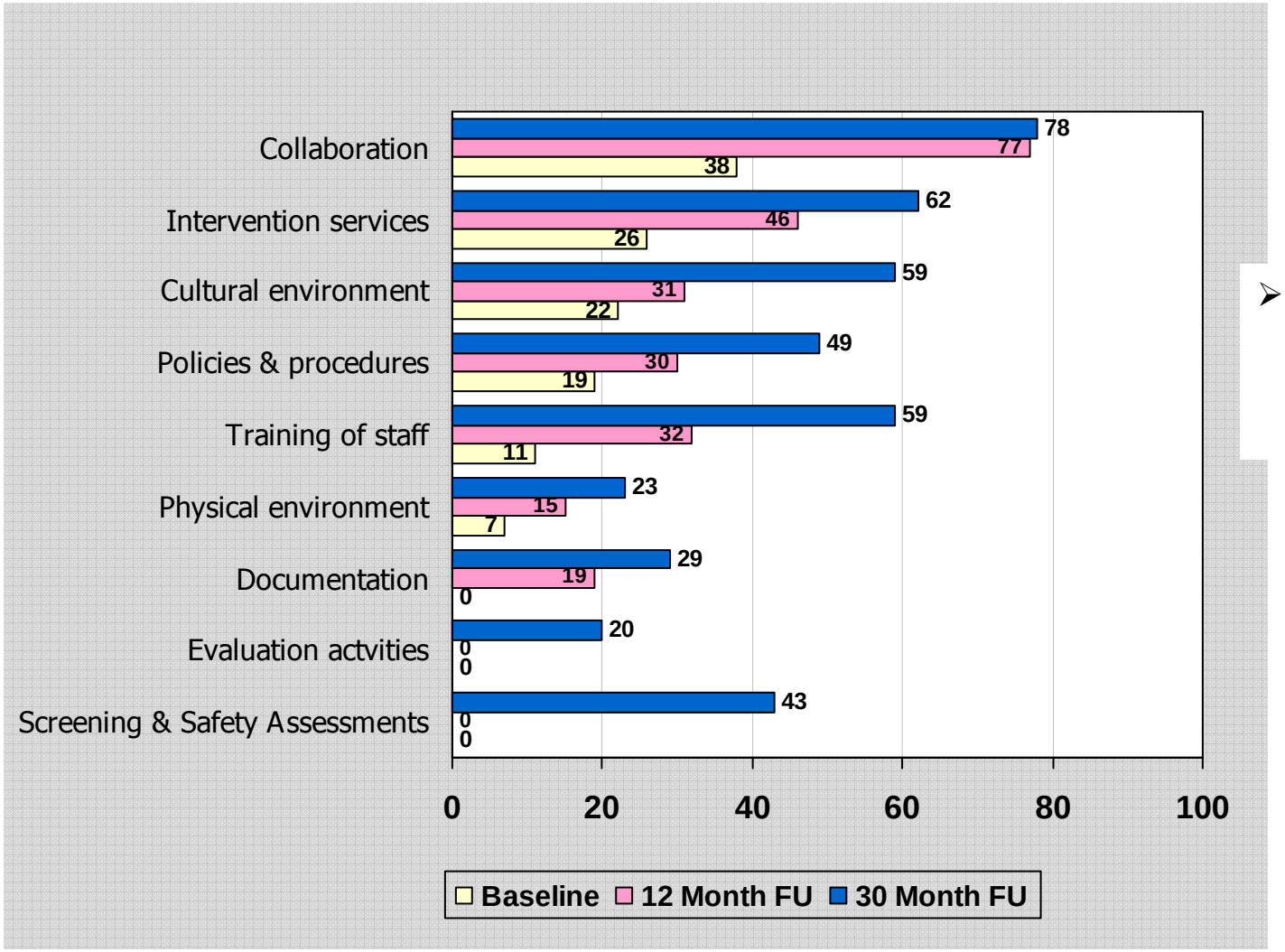
12 Month Follow-Up

Note: Hospitals have been randomly allocated code names from a selection of native Aotearoa New Zealand plants.



30 Month Follow-Up

Figure 4. Partner Abuse Domain Median Scores



- Improvements were seen in all partner abuse programme domains.

Table 4. Partner Abuse Baseline and Follow-up Scores

	Mean			Median			Hospitals Achieving Score ≥70		
	B	***F_{12}***	***F_{30}***	***B***	***F_{12}***	***F_{30}***	***B***	***F_{12}***	***F_{30}***
Overall Score	21.2	32.3	45.9	19.6	27.6	49.2	1 (4%)	2 (8%)	5 (20%)
Domain Scores									
Collaboration	35.4	66.3	71.6	37.5	77.1	78.5	1 (4%)	15 (60%)	19 (76%)
Intervention Services	33.6	46.3	57.1	26.4	45.7	62.1	4 (16%)	6 (24%)	9 (36%)
Hospital Cultural Environment	27.9	35.3	51.3	22.1	30.7	59.0	2 (8%)	5 (20%)	8 (32%)
Training of Staff	23.7	37.0	46.9	10.9	31.9	58.7	1 (4%)	5 (20%)	8 (32%)
Hospital Policies and Procedures	22.3	31.5	47.0	19.4	29.5	48.8	1 (4%)	2 (8%)	7 (28%)
Screening & Safety Assessment	14.3	17.1	34.5	0.0	0.0	42.5	1 (4%)	2 (8%)	5 (20%)
Evaluation Activities	11.5	14.3	30.0	0.0	0.0	20.0	1 (4%)	1 (4%)	4 (16%)
Hospital Physical Environment	10.2	20.6	36.6	7.1	14.7	23.1	0	1 (4%)	4 (16%)
Documentation	6.5	18.9	35.2	0.0	19.1	28.6	0	0	2 (8%)

Notes: ***B*** =Baseline; ***F_{12}*** =12 month follow-up; ***F_{30}*** = 30 month follow-up; 70 is selected benchmark score

Univariate Trend Results

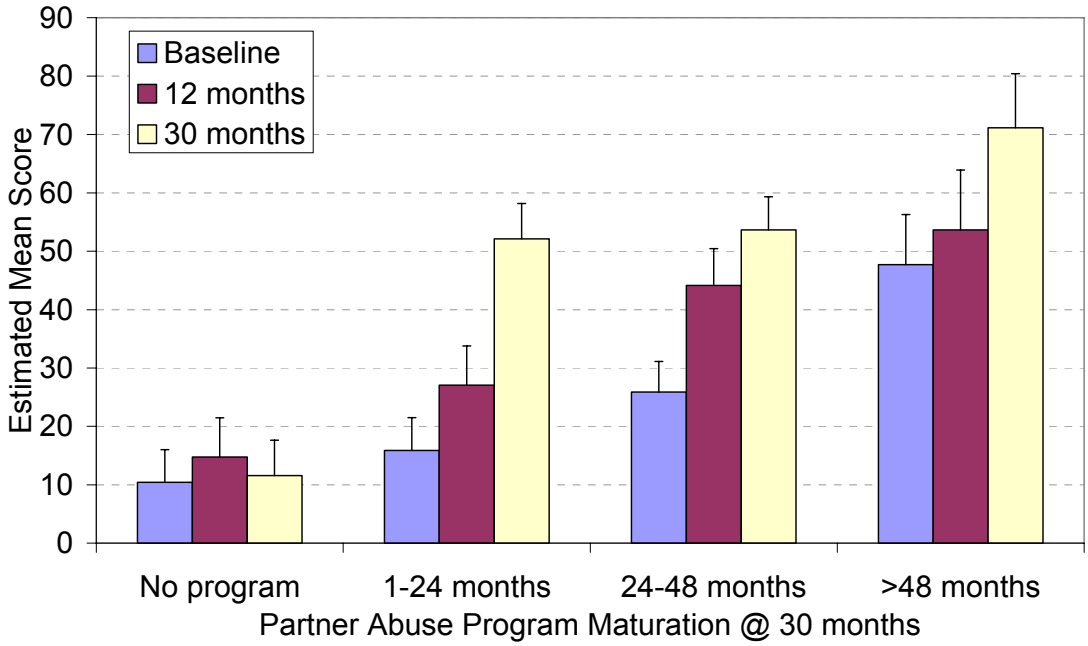
As demonstrated by Figure 5, partner abuse programme scores increased significantly over time ($p<.001$). There are no statistically significant additional differences for either urban/rural ($p=0.44$) or hospital size measures ($p=0.08$).[a]

Three factors demonstrated strongly significant associations with audit score, and audit score over time.[b] These included the following:

- programme maturation (time programme had been in place at the time of the 30 month audit)
- presence of a partner abuse coordinator
- coordinator in a dual role (with partner abuse and child abuse and neglect responsibilities).

Figure 5 shows that hospitals that have no partner abuse intervention programme at 30 months have shown no change in scores over time, whereas all other groups show increases over time. Hospitals with 1-24 month maturation rapidly catch up with those with 24-49 maturation, whereas those with >48 months maturation have remained consistently ahead of all other hospitals.

Figure 5. Programme Maturation



Hospitals without a Partner Abuse Intervention Coordinator had consistently low scores. This compared to those with a part time coordinator, which

[a] Appendix G presents the estimated mean scores and standard errors for these factors.
[b] Table 2 in Appendix G presents the ANOVA results.

steadily increased over time, and those with a full time coordinator, which reached a plateau after 12 months (Figure 6).

Figure 6. Presence of Coordinator[a]

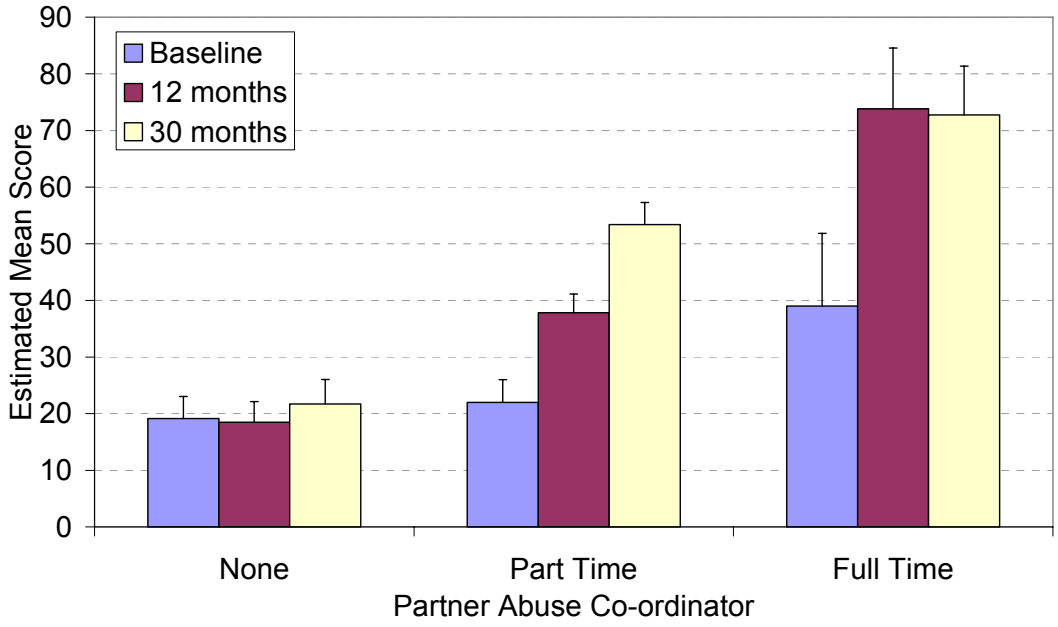
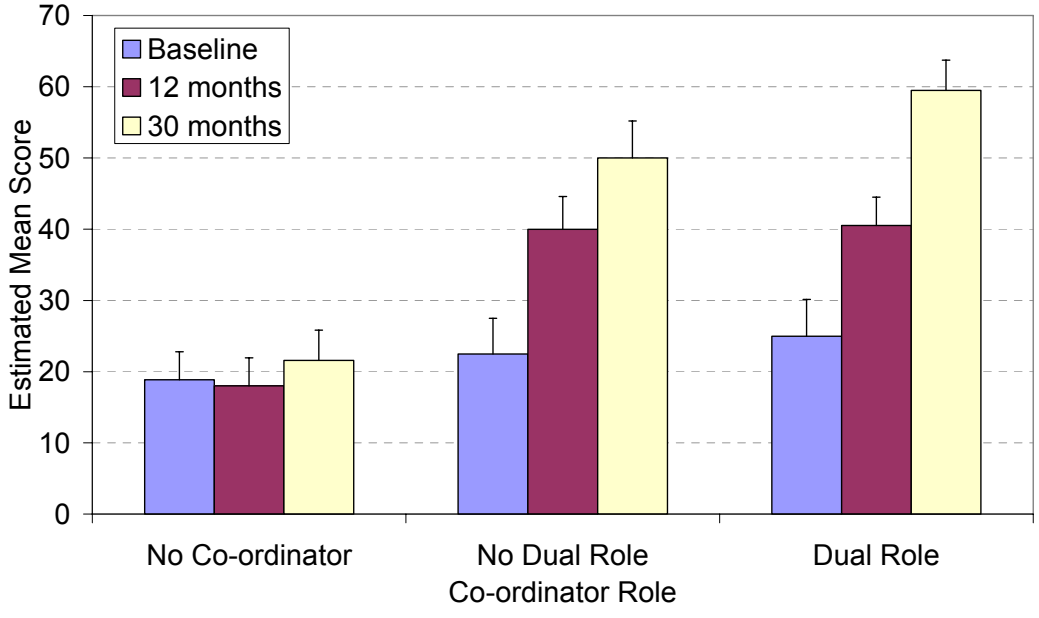


Figure 7 shows an advantage at 30 months to having a dual role coordinator (with programme responsibility for partner violence and child abuse and neglect).

Figure 7. Dual Role Coordinator



[a] Analysis allows for changing presence of a coordinator in a hospital over time.

Multivariate Trend Results

The multivariate analysis identified that the following factors best explain the changes in audit scores (Table 5):

- time
- programme maturation
- presence of partner abuse coordinator
- presences of partner abuse coordinator interaction with time

Table 5. Multivariate Model

	df	F	p-value
Time	2, 21	21.54	<0.001
Maturation	3, 21	6.08	0.0004
Partner Abuse Coordinator	2, 21	28.79	<0.001
Partner Abuse Coordinator x Time	4, 21	11.37	<0.001

Child Abuse and Neglect Audit Findings

Child Abuse and Neglect Summary

- At 30 month follow-up, the child abuse programme score ranged from 18 to 97, with 59 being the typical (median) score.
- The median child abuse and neglect programme score increased from 37 at baseline, to 51 at 12 month follow-up, to 59 at 30 month follow-up.
- The 30 month follow-up scores reflect a 17% increase from 12 month follow-up scores and a 62% increase from baseline scores.
- 4 hospitals (16%) achieved the target score of 70.

In Figure 8, box plots display the change in child abuse and neglect scores over time; hospital league tables are provided in Figure 9; and median domain scores over time are provided in Figure 10. Table 6 provides the data supporting the figures. Frequencies for individual Delphi items are provided in Appendix F.

Figure 8. Child Abuse and Neglect Programme Scores

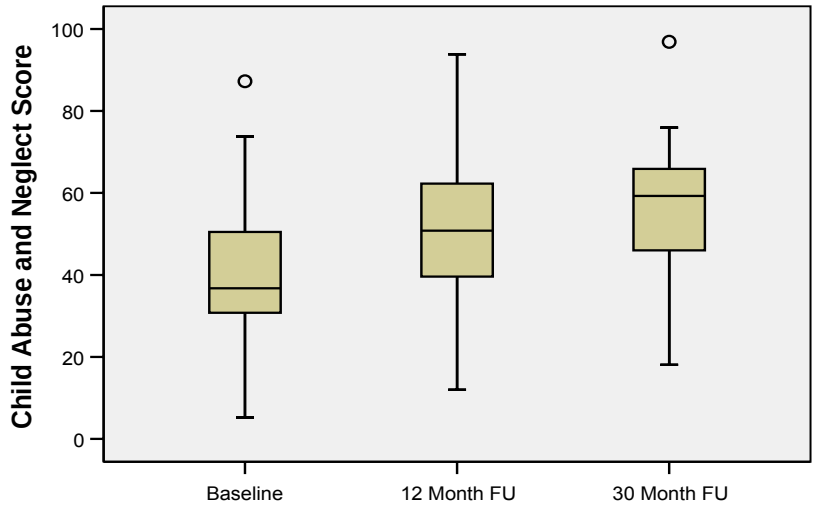
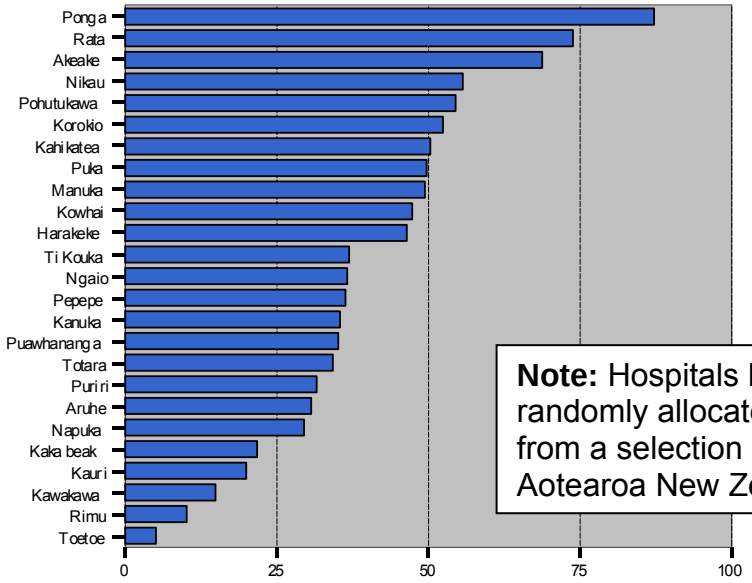
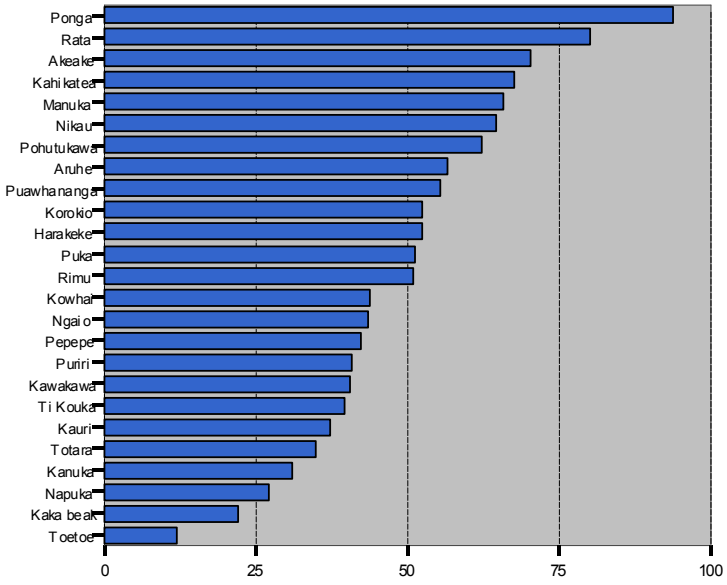


Figure 9. Child Abuse and Neglect Hospital League Tables

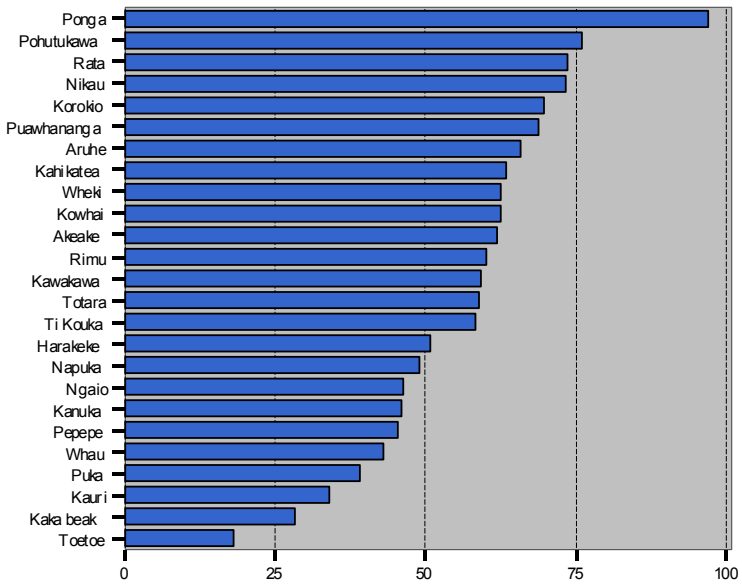


Baseline

Note: Hospitals have been randomly allocated code names from a selection of native Aotearoa New Zealand plants.



12 Month Follow-Up



30 Month Follow-Up

Figure 10. Child Abuse and Neglect Domain Scores (Median Scores)

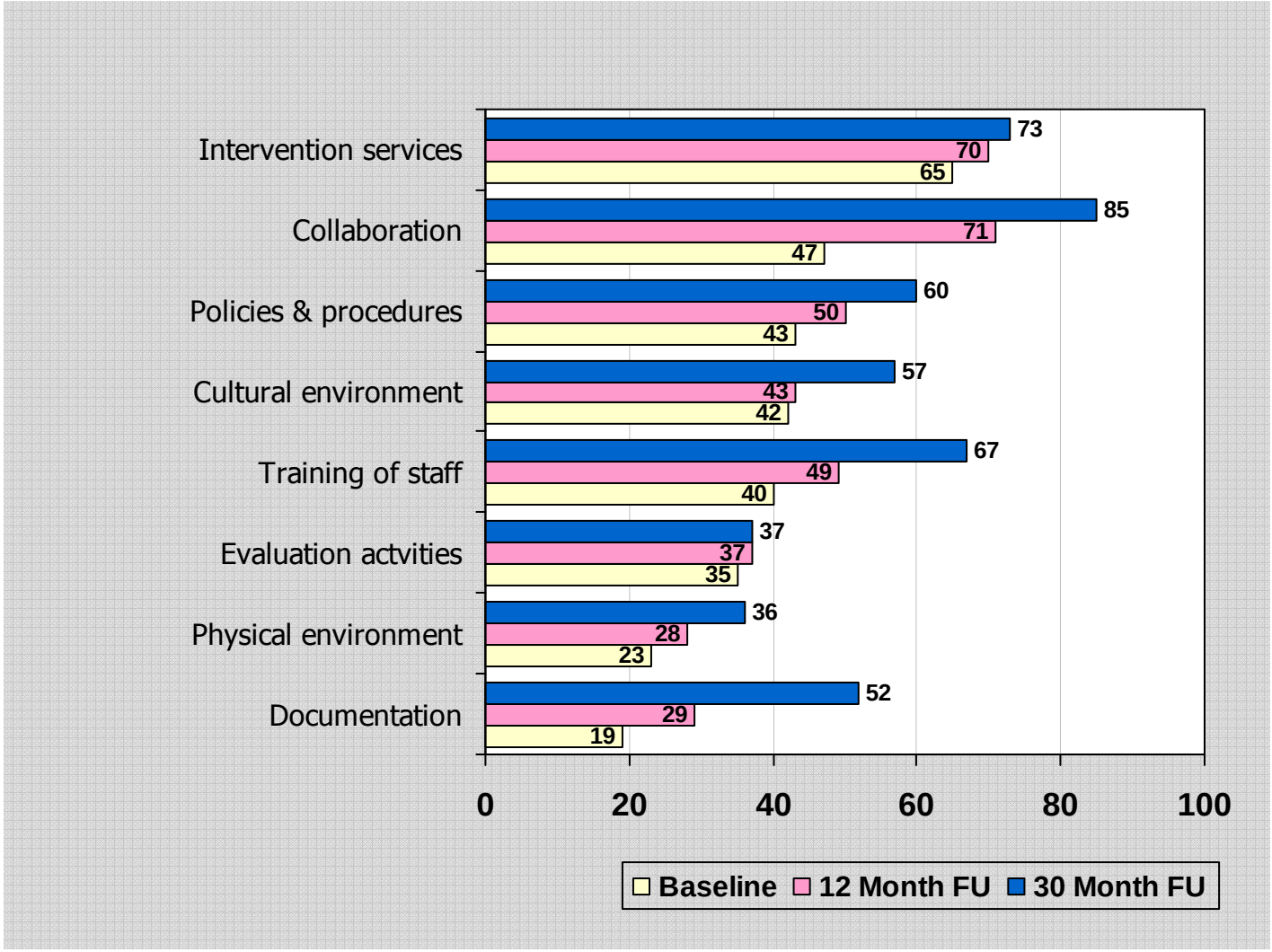


Table 6. Child Abuse and Neglect Programme Scores

	Mean			*Median*			*Hospitals Achieving Score ≥70*		
	B	***F_{12}***	***F_{30}***	***B***	***F_{12}***	***F_{30}***	***B***	***F_{12}***	***F_{30}***
Overall Score	40.6	49.5	56.5	36.7	50.8	59.3	2 (8%)	3 (12%)	4 (16%)
Domain Scores									
Intervention Services	62.4	67.7	70.0	65.4	70.4	72.8	12 (48%)	13 (52%)	13 (52%)
Collaboration	45.1	70.4	78.3	46.5	70.8	85.4	5 (20%)	15 (60%)	20 (80%)
Hospital Policies and Procedures	44.6	51.1	58.5	42.5	50.0	59.7	3 (12%)	5 (20%)	7 (28%)
Hospital Cultural Environment	40.9	46.2	55.0	41.5	43.4	56.6	3 (12%)	5 (20%)	6 (24%)
Training of Staff	36.8	51.5	58.4	39.7	49.4	66.7	2 (8%)	9 (36%)	12 (48%)
Evaluation Activities	31.9	35.1	37.7	35.1	36.6	36.6	1 (4%)	1 (4%)	5 (20%)
Documentation	30.9	35.6	49.1	19.0	28.6	58.4	5 (20%)	5 (20%)	7 (28%)
Hospital Physical Environment	23.2	30.6	39.5	23.0	28.0	35.6	1 (4%)	2 (5%)	2 (8%)

Notes: ***B*** =Baseline; ***F_{12}*** =12 month follow-up; ***F_{30}*** = 30 month follow-up; 70 is selected benchmark score

Univariate Trend Results

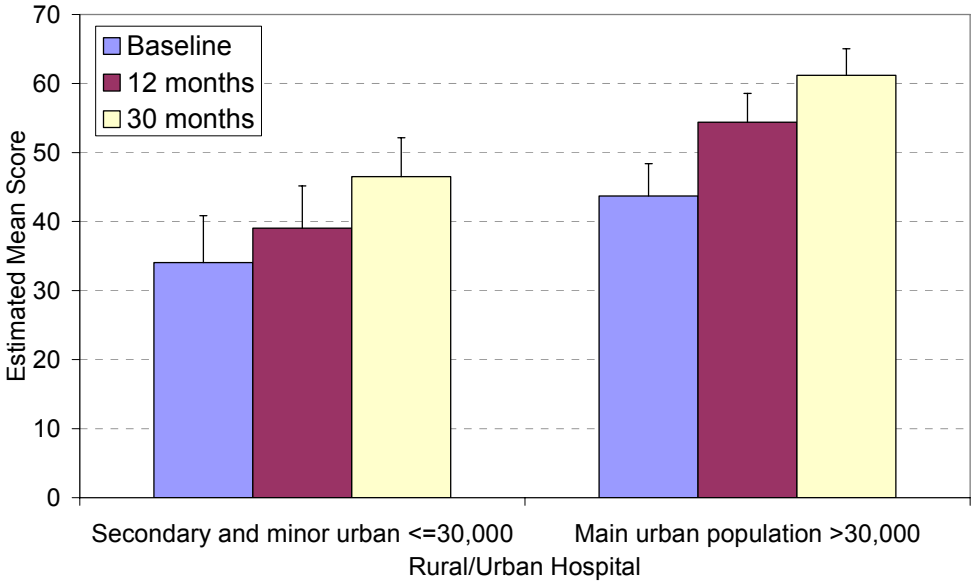
Child abuse and neglect programme scores were significantly associated with the following factors:

- time (p<.001)
- urban/rural location (p=0.05)
- hospital size (p=0.05)
- programme maturation (at the 30 month audit; p=0.009)
- presence of a child abuse coordinator (p<.001)
- dual role of the coordinator (p=0.03).

While there were univariate associations, no factors had changing associations with audit score over time (no interaction effects with time).[a] There were, however, still strong time effects as is demonstrated in the following figures.

Figure 11 shows the steady increase of audit scores with the secondary or minor urban hospitals lagging below the major urban hospitals.

Figure 11. Rural or Urban catchment



[a] Appendix G presents the estimated mean scores and standard errors for these effects.

As would be expected, the hospital size follows the trends seen in the rural/urban setting, with increases in both groups of hospital and the smaller hospitals lagging behind the larger hospitals (Figure 12).

Figure 12. Hospital Size (number of beds)

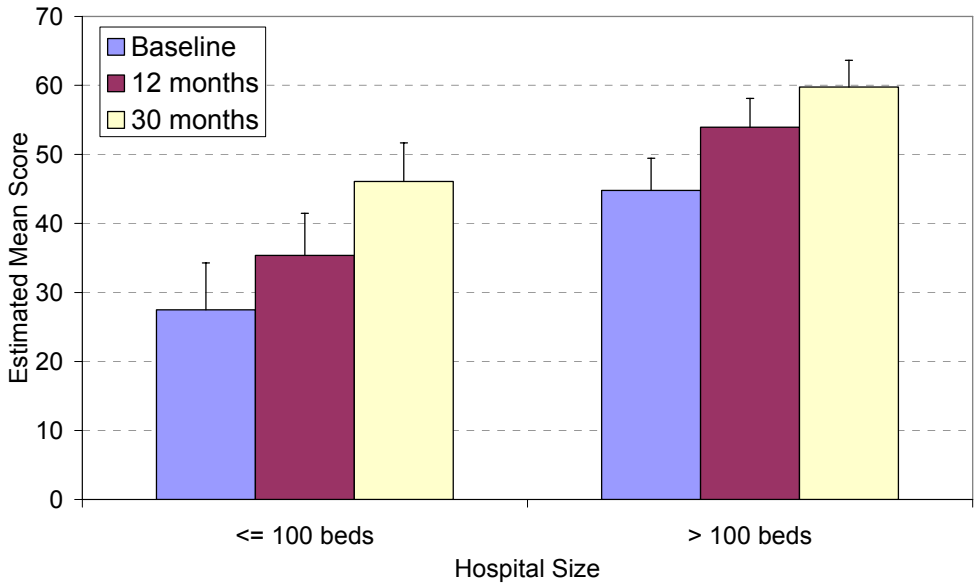


Figure 13 demonstrates that there are increasing audit scores with increasing age of the program.

Figure 13. Programme Maturation

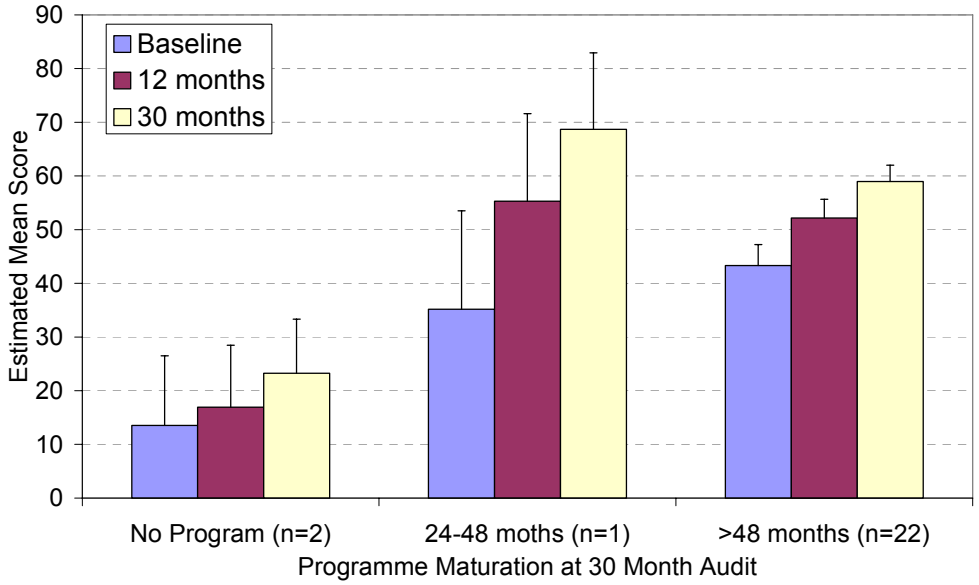


Figure 14 demonstrates the impact of the presence of child abuse and neglect coordinators. While their effect is not as strong as seen for partner abuse coordinators, scores are incrementally higher in programmes with part-time and full-time coordinators.

Figure 14. Presence of Child Abuse and Neglect Coordinator

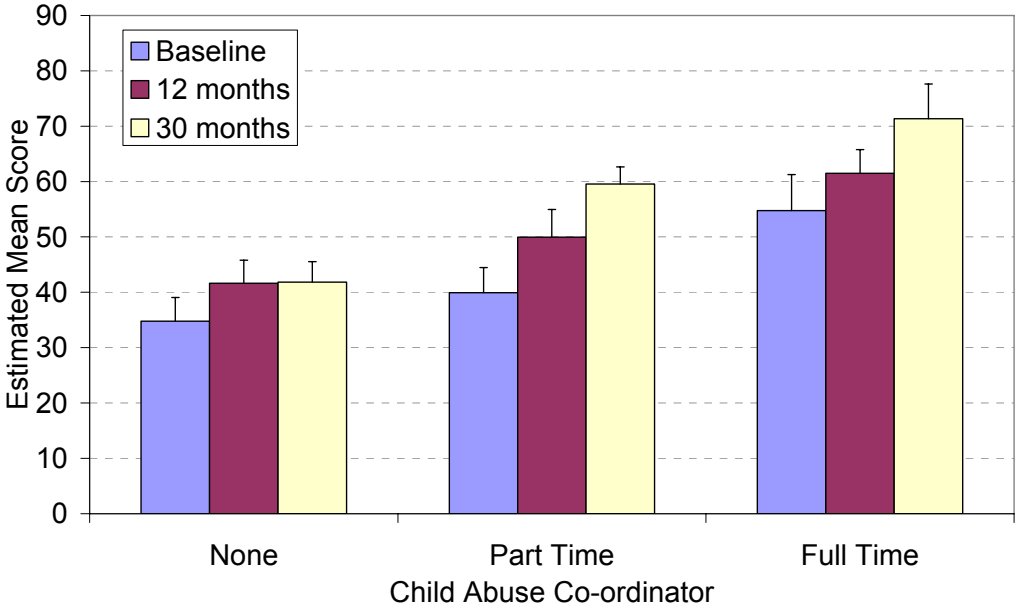
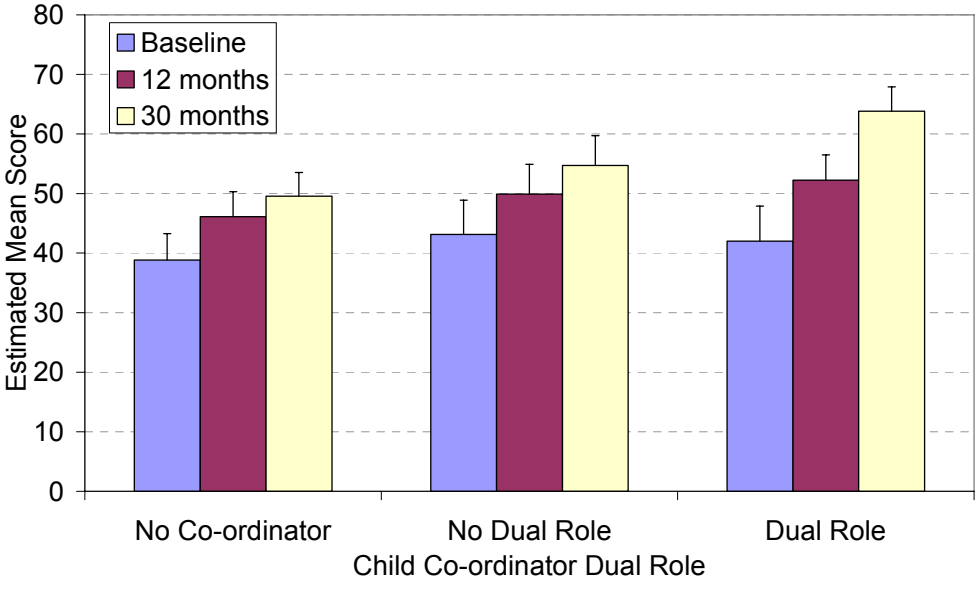


Figure 15 demonstrates the impact of dual role coordinators. The effect is not as strong as for partner abuse coordinators, but shows minimal differences between coordinators with and without dual roles for the first two audits, but a strong difference in the third audit.

Figure 15. Dual Role of co-ordinator



Multivariate Trend Results

The multivariate analysis identified that the following factors best explain the changes in audit scores (Table 7):

- time
- programme maturation
- child abuse coordinator.

Therefore factors such as urban/rural, hospital size and dual role of coordinator are highly correlated with presence of a child abuse coordinator, time and maturation of the programme.

Table 7 . Multivariate model

	df	F	p-value
Time	2, 22	12.63	0.0002
Maturation	2, 22	4.07	0.03
Child Abuse Coordinator	2, 22	12.20	0.0003

DISCUSSION

Results of the 30 month follow-up audit indicate that significant progress continues to be made in programme development for responding to both partner abuse and child abuse and neglect. The median score for partner abuse intervention programmes was 49, an increase of 151% over the 30 months since the baseline audit. The median score for child abuse and neglect intervention programmes was 59, an increase of 62% since baseline.

While significant improvements have been made, scores continue to reflect intermediate stages of programme implementation. It is a concern that several hospitals have yet to begin developing a system response to family violence, indicated by low scores and the absence of a Family Violence Intervention Coordinator. Trend analysis indicated that having a designated Family Violence Intervention Coordinator, programme maturation and time (audit round) all predicted higher family violence programme scores. With dedicated District Health Board resourcing, family violence programme process indicators are likely to continue steady improvement.

Strengths and Limitations

This family violence evaluation project contributes evidence informing healthcare system programme development for addressing family violence, a significant – preventable- public health problem. That audit scores were based on an external auditor provides an advantage over self-report or internal audits alone. In addition, the series of baseline, 12 and 30 month follow-up audits allowed the tracking of change over time. Indeed, this longitudinal series of three audits has successfully captured the implementation of programme planning across individual hospitals, and more broadly New Zealand healthcare.

While this audit report focuses on audit scores, it is important to appreciate the potential that the audit process served as a lever for system change. The evaluation procedures involved in the audit required active participation by stakeholders within hospitals, thus increasing the likelihood of feeding back evaluation findings into further programme development. Through the audit process many hospitals learned the important elements of a family violence programme.

The limitations that have been noted in both the baseline and 12 month follow-up audit remain. Importantly, the scope of the audit has focused on acute care hospital services (at the exclusion of community services) and the roll-out of family violence programme initiatives across hospital services is not adequately captured. In addition, audit scores provide only a snap shot of services in place at the time of the audit, rather than those under development. Finally, we acknowledge that the Child Abuse and Neglect Delphi used in the audits to date does not capture all the elements of the more developed programmes. A Delphi process was recently completed to address the content validity and the revised Child Abuse and Neglect Delphi will be implemented for future audit rounds.

We also caution the reader that the hospital audit process focused on system indicators rather than quality of services provided. It is important that the results of the audit tool are balanced with outcome based measures.

Conclusions

Healthcare system family violence process indicators have steadily improved over the past 30 months, evidenced by three rounds of hospital audit data. Collaboration with community agencies, staff training and intervention services are now present across the majority of hospitals for both partner abuse and child abuse and neglect. With additional dedicated family violence programme resourcing and time we expect that the number of hospitals achieving the benchmark score of 70 will grow in the coming years. The healthcare system is making significant progress in responding to the high prevalence of family violence in our society, potentially reducing both acute and long-term health effects. While this evaluation provides important information to guide and monitor further system development, it is important to iterate that it is only one aspect of an effective healthcare family violence strategy. Community healthcare responsiveness and research evidence of intervention effectiveness are other elements that will be necessary to achieve family violence prevention targets.

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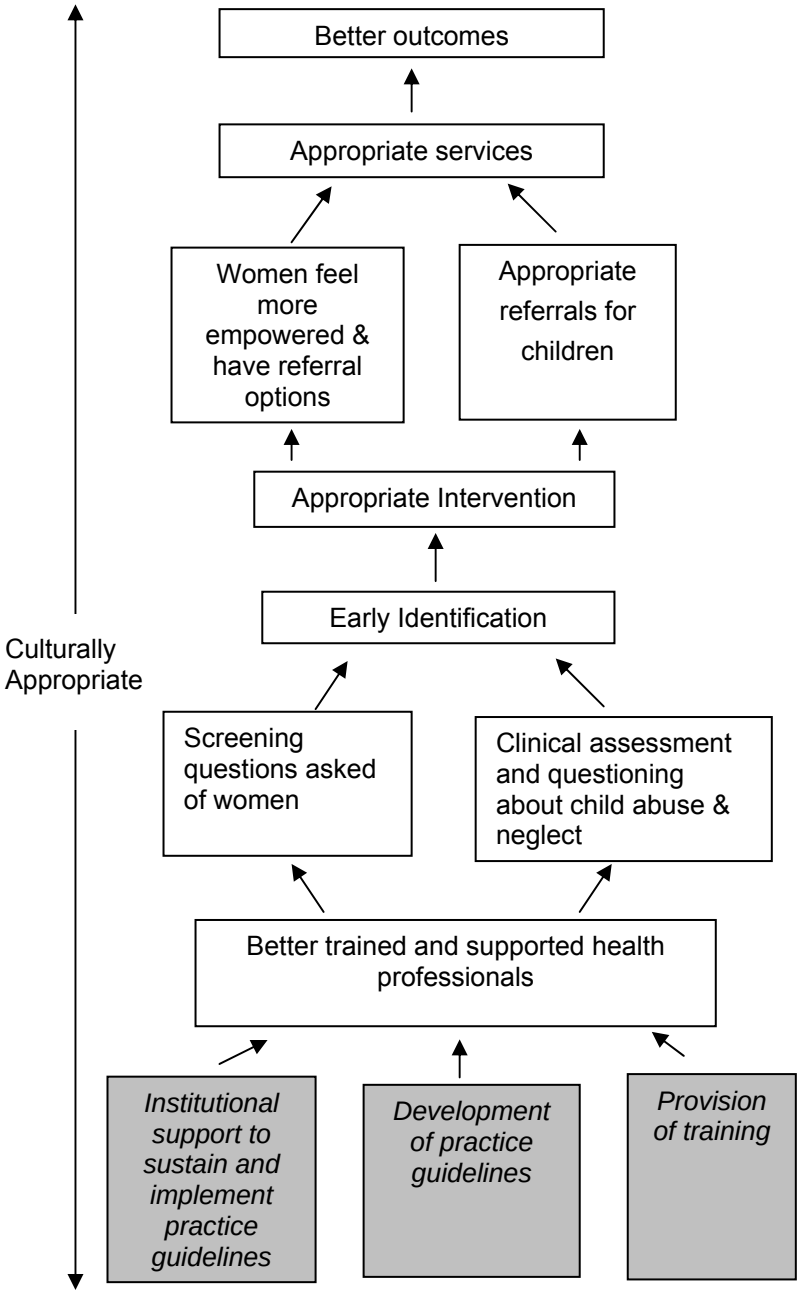
Appendix A: *Family Violence Project Programme Logic*[a]



[a] MOH Advisory Committee; modified from Duignan, Version 4, 16-10-02

Appendix B: *District Health Board Hospitals*

District Health Board	Hospital	Level of care
Northland	Kaitaia Whangarei	S S
Waitemata	North Shore Waitakere	S S
Auckland	Auckland/Starship	T
Counties Manukau	Middlemore	T
Waikato	Hamilton Thames	T S
Bay of Plenty	Tauranga Whakatane	S S
Lakes District	Rotorua	S
Tairawhiti	Gisborne	S
Taranaki	New Plymouth	S
Hawkes Bay	Hawkes Bay	S
Whanganui	Wanganui	S
Midcentral	Palmerston North	S
Capital and Coast	Wellington	T
Wairarapa	Masterton	S
Hutt Valley	Lower Hutt	S
Nelson-Marlborough	Nelson Wairau	S S
Canterbury	Christchurch Ashburton	T S
West Coast	Greymouth	S
South Canterbury	Timaru	S
Otago	Dunedin	T
Southland	Invercargill	S

Links to DHB Maps:

http://www.moh.govt.nz/dhbmaps

Appendix C: *Delphi Scoring Weights*

The reader is referred to the original Delphi scoring guidelines available at: http://www.ahcpr.gov/research/domesticviol/.

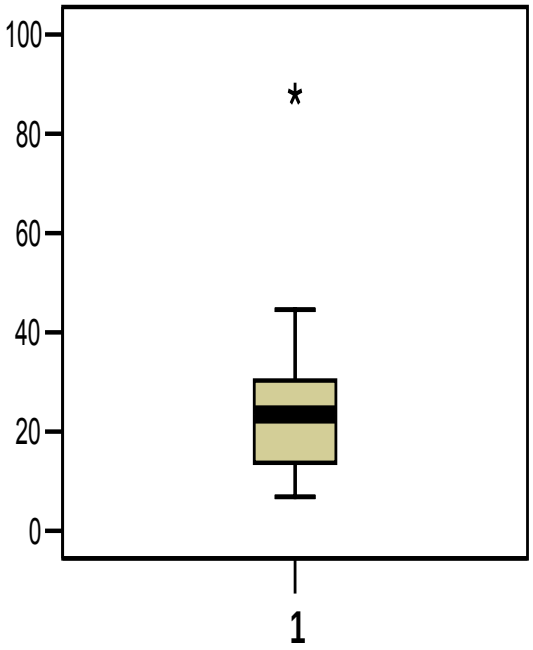
The weightings used for this study are provided below.

Domain	Partner Abuse	Child Abuse & Neglect
1. Policies and Procedures	1.16	1.16
2. Physical Environment	0.86	0.86
3. Cultural Environment	1.19	1.19
4. Training of staff	1.15	1.15
5. Screening and Safety Assessment	1.22	N/A
6. Documentation	0.95	0.95
7. Intervention Services	1.29	1.29
8. Evaluation Activities	1.14	1.14
9. Collaboration	1.04	1.04

Total score for Partner Abuse= sum across domains (domain raw score * weight)/10

Total score for CAN = sum across domains (domain raw score*weight)/8.78.

Appendix D: *How to Interpret Box Plots*



- The length of the box is important. The lower boundary of the box represents the 25th percentile and the upper boundary of the box the 75th percentile. This means that the box includes the middle half of all scores. So, 25% of scores will fall below the box and 25% above the box.
- The thick black line indicates the middle score (median or 50th percentile). This sometimes differs from the mean, which is the arithmetic average score.
- A circle indicates an 'outlier', a value that is outside the general range of scores (1.5 box-lengths from the edge of a box).
- A star indicates an 'extreme' score (3 box-lengths from the edge of a box).
- The whiskers or needles extending from the box indicate the score range, the highest and lowest scores that are not outliers (or extreme values).

Appendix E: *Partner Abuse Delphi Item Analysis*

Category 1. Hospital Policies and Procedures

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
1.1	Are there official, written hospital policies regarding the assessment and treatment of victims of partner abuse? If yes, do these policies:	**10 40%**	**9 36%**	**21 78%**
	a) define partner abuse?	8 32%	9 36%	**20 74%**
	b) mandate training on partner abuse for any staff?	4 16%	5 20%	**18 67%**
	c) advocate universal screening for women anywhere in the hospital?	4 16%	6 24%	**16 59%**
	d) define who is responsible for screening?	3 12%	4 16%	**17 63%**
	e) address documentation?	7 28%	8 32%	**19 70%**
	f) address referral of victims?	8 32%	8 30%	**21 78%**
	g) address legal reporting requirements?	5 20%	6 24%	**16 60%**
	h) address the responsibilities to, and needs of, Māori?	3 12%	6 24%	**18 67%**
	i) address the needs of other cultural and/or ethnic groups?	3 12%	5 20%	**17 63%**
	k) address the needs of LGBT clients?	2 8%	2 8%	**8 30%**
1.2	Is there evidence of a hospital-based partner abuse working group? If yes, does the working group:	15 60%	19 76%	**19 70%**
	a) meet at least every month?	12 48%	14 56%	**16 59%**
	b) include representative(s) from more than two departments? List represented departments:	15 60%	19 76%	**18 67%**
	c) include representative(s) from the security department?	0 0%	7 28%	**7 26%**
	d) include physician(s) from the medical staff?	12 48%	16 64%	**16 59%**
	e) include representative(s) from a partner abuse advocacy organization (eg., Women's Refuge)?	4 16%	9 36%	**14 52%**
	f) include representative(s) from hospital administration?	13 52%	16 64%	**17 63%**
	g) include Māori representative(s)?	12 48%	17 68%	**19 70%**

	"YES" responses	**Baseline n %**	**12 mo FU n %**	**30 mo FU n %**
1.3	Does the hospital provide direct financial support for the partner abuse programme? If yes, how much annual funding? (*Choose one*):	14 52%	18 72%	**1867 67%**
	a) < $5000/year	1 4%	1 4%	**1 4%**
	b) $5000-$10,000/year	3 12%	3 12%	**0 0%**
	c) > $10,000/year	10 40%	14 56%	**17 63%**
1.3a	Is funding set aside specifically for Māori programmes and initiatives? If yes, how much annual funding? (*Choose one):*	**1 4%**	**1 4%**	**2 8%**
	a) < $5000/year	1 4%	1 4%	**1 4%**
	b) > $5000/year	0 0%	0 0%	**1 4%**
	Is there a mandatory universal screening policy in place? If yes, does the policy require screening of all women: (*choose one*)	5 20%	6 24%	**9 33%**
	a) in the emergency department (ED) or any other out-patient area?	0 0%	3 12%	**1 4%**
	b) in in-patient units only?	0 0%	0 0%	**0 0%**
	c) in more than one out-patient area?	0 0%	1 4%	**8 30%**
	d) in both in-patient and out-patient areas? List departments:	5 20%	2 8%	**10 37%**
1.5	Are there quality assurance procedures in place to ensure partner abuse screening? If yes, are there:	5 20%	6 24%	**10 37%**
	a) regular chart audits to assess screening? List departments:	2 8%	3 12%	**10 37%**
	b) positive reinforcers to promote screening? List departments:	2 8%	3 12%	**5 19%**
	c) is there regular supervision? List departments	**3 12%**	**6 24%**	**11 40%**
1.6	Are there procedures for security measures to be taken when victims of partner abuse are identified? If yes, are there:	11 44%	12 48%	**10 37%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	a) written procedures that outline the security department's role in working with victims and perpetrators?	3 12%	8 32%	**11 40%**
	b) procedures that include name/phone block for victims admitted to hospital?	3 12%	6 24%	**8 30%**
	c) procedures that include provisions for safe transport from the hospital to shelter?	1 4%	4 16%	**7 26%**
	d) do these procedures take into account the needs of Māori?	**3 12%**	**4 16%**	**6 22%**
1.7	Is there an identifiable partner abuse coordinator at the hospital? If yes is it a: (*choose one*)	**12 48%**	**16 64%**	**17 63%**
	a) part time position or included in responsibilities of someone with other responsibilities?	11 44%	15 68%	**15 56%**
	b) full-time position with no other responsibilities?	1 4%	1 4%	**2 7%**

Category 2. Hospital Physical Environment

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
2.1	Are there posters and/or brochures related to partner abuse on public display in the hospital?	20 80%	25 100%	**26 96%**
	If yes, total number of *locations* (up to 35): 0	5 20%	0 0%	**1 4%**
	1-2	4 16%	6 24%	**3 11%**
	3-5	7 28%	8 32%	**1 4%**
	6-10	7 28%	6 24%	**10 37%**
	11-20	1 4%	3 12%	**5 19%**
	35	1 4%	2 8%	**6 22%**
	Are there Māori images related to partner abuse on public display in the hospital?	9 36%	17 68%	**23 85%**
	If yes, total number *locations (up to 17)* 0	16 64%	8 32%	**4 15%**
	1-2	7 28%	9 36%	**4 15%**
	3-5	2 8%	4 16%	**4 15%**
	6-10	0 0%	2 8%	**6 22%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	11-17	0 0%	2 8%	**7** **26%**
2.2	Is there referral information (eg., local or national phone numbers) related to partner abuse services on public display in the hospital? (Can be included on the posters/brochure noted above).	20 80%	24 96%	**26** **96%**
	If yes, total number *locations* (up to 35):			
	0	5 20%	1 4%	**1** **4%**
	1-2	7 28%	4 16%	**1** **4%**
	3-4	7 28%	8 32%	**2** **7%**
	5-10	3 12%	8 32%	**10** **38%**
	11-20	2 8%	2 8%	**8** **30%**
	32-35	0 0%	1 4%	**2** **7%**
	Is there referral information related to Māori providers of partner abuse services on public display in the hospital?	8 32%	20 80%	**24** **89%**
	If yes, total number *locations (up to 17)*			
	0	17 68%	5 20%	**3** **11%**
	1-2	7 28%	7 28%	**5** **19%**
	3-4	1 4%	5 20%	**2** **7%**
	5-10	0 0%	6 24%	**9** **33%**
	11-17	0 0%	2 8%	**6** **22%**
	Is there referral information related to partner abuse services for particular ethnic or cultural group (other than Māori or Pakeha) on public display in the hospital?	4 16%	7 28%	**13** **48%**
	If yes, total number *locations (up to 17)*			
	0	21 84%	18 72%	**14** **52%**
	1	4 16%	5 20%	**6** **22%**
	2	0 0%	1 4%	**2** **7%**
	17	0 0%	1 4%	**1** **4%**
2.3	Does the hospital provide temporary (<24 hours) safe shelter for victims of partner abuse who cannot go home or cannot be placed in a community-based shelter? If yes: (*choose one a-c and answer d*)	4 16%	7 28%	**10** **37%**
	a) Victims are permitted to stay in ED until placement is secured.	0 0%	1 4%	**2** **7%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	b) Victims are provided with safe respite room, separate from ED, until placement is secured.	1 4%	2 8%	**0 0%**
	c) In-patient beds are available for victims until placement is secured.	3 12%	4 16%	**8 30%**
	d) Does the design and use of the safe shelter support Māori cultural beliefs and practices?	5 20%	6 24%	**7 26%**

Category 3. Hospital Cultural Environment

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
3.1	In the last 3 years, has there been a formal (written) assessment of the hospital staff's knowledge and attitude about partner abuse? If yes, which groups have been assessed?	5 20%	11 44%	**13 48%**
	a) nursing staff Participating Departments:	5 20%	9 36%	**13 48%**
	b) medical staff Participating Departments:	5 20%	7 28%	**6 22%**
	c) administration	4 16%	7 28%	**7 26%**
	d) other staff/employees	3 12%	8 32%	**8 30%**
	If yes, did the assessment address staff knowledge and attitude about Māori and partner abuse?	1 4%	1 4%	**1 4%**
3.226	How long has the hospital's partner abuse programme been in existence? (*Choose one*):			
	a) 1-24 months	13 52%	15 60%	**7 26%**
	b) 24-48 months	2 8%	3 12%	**9 33%**
	c) >48 months	0 0%	1 4%	**3 11%**
3.3	Does the hospital have plans in place for responding to employees experiencing partner abuse? If yes:	15 60%	15 60%	**16 59%**
	a) Is there a hospital policy covering the topic of partner abuse in the workplace?	2 8%	1 4%	**11 41%**

	b) Does the Employee Assistance programme maintain specific policies and procedures for dealing with employees experiencing partner abuse?	9 36%	6 24%	**13** **48%**
	c) Is the topic of partner abuse among employees covered in the hospital training sessions and/or orientation?	10 40%	10 40%	**16** **59%**
3.4	Does the hospital's partner abuse programme address cultural competency issues? If yes:	24 96%	24 96%	**25** **93%**
	a) Does the hospital's policy specifically recommend universal screening regardless of the patient's cultural background?	4 16%	4 16%	**17** **63%**
	b) Are cultural issues discussed in the hospital's partner abuse training programme?	9 36%	10 40%	**14** **52%**
	c) Are translators/interpreters available for working with victims if English is not the victim's first language?	22 88%	25 100%	**26** **96%**
	d) Are referral information and brochures related to partner abuse available in languages other than English?	5 20%	6 24%	**11** **41%**
3.5	Does the hospital participate in preventive outreach and public education activities on the topic of partner abuse? If yes, is there documentation of: (*a or b and answer c*)	14 56%	15 60%	**20** **74%**
	a) 1 programme in the last 12 months?	9 36%	5 20%	**8** **30%**
	b) >1 programme in the last 12 months?	5 20%	10 40%	**12** **44%**
	c) Does the hospital collaborate with Māori community organizations and providers to deliver preventive outreach and public education activities?	8 32%	12 48%	**17** **63%**

Category 4. Training of Providers

	"YES" responses	**Baseline** **n** %	**12 mo FU** **n** %	**30 mo FU** **n** **%**
4.1	Has a formal training plan been developed for the institution? If yes:	5 20%	9 36%	**16** **59%**
	a) Does the plan include the provision of regular, ongoing education for clinical staff? Participating Departments:	4 16%	8 32%	**15** **56%**
	b) Does the plan include the provision of regular, ongoing education for non-clinical staff?	2 8%	7 28%	**15** **56%**
4.2	During the past 12 months, has the hospital provided training on partner abuse:			

	"YES" responses	**Baseline n %**	**12 mo FU n %**	**30 mo FU n %**
	a) as part of the mandatory orientation for new staff? Participating departments:	3 12%	6 24%	**12 44%**
	b) to members of the clinical staff via colloquia or other sessions?	5 20%	15 60%	**17 63%**
4.3	Does the hospital's training/education on partner abuse include information about:			
	a) definitions of partner abuse?	10 40%	14 56%	**15 56%**
	b) dynamics of partner abuse?	11 44%	14 56%	**15 56%**
	c) epidemiology?	9 36%	13 52%	**14 52%**
	d) health consequences?	9 36%	13 52%	**14 52%**
	e) strategies for screening?	9 36%	12 48%	**12 44%**
	f) risk assessment?	7 28%	11 44%	**12 44%**
	g) documentation?	10 40%	13 52%	**12 44%**
	h) intervention?	8 32%	13 52%	**13 48%**
	i) safety planning?	10 40%	9 36%	**11 41%**
	j) community resources?	5 20%	14 56%	**12 44%**
	k) reporting requirements?	6 24%	10 40%	**12 44%**
	l) legal issues?	6 24%	12 48%	**12 44%**
	m) confidentiality?	9 36%	12 48%	**12 44%**
	n) cultural competency?	7 28%	10 40%	**10 37%**
	o) clinical signs/symptoms?	9 36%	14 56%	**14 52%**
	p) Māori models of health?	3 12%	6 24%	**7 26%**
	q) risk assessment for children of victims?	6 24%	11 44%	**12 44%**
	r) the social, cultural, historic, and economic context in which Māori family violence occurs?	2 8%	5 20%	**6 22%**
	s) te Tiriti o Waitangi?	3 12%	5 20%	**4 15%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	t) Māori service providers and community resources?	7 28%	13 52%	**12 44%**
	u) service providers and community resources for ethnic and cultural groups other than Pakeha and Māori?	3 12%	5 20%	**7 26%**
	v) partner abuse in same-sex relationships?	3 12%	5 20%	**8 30%**
	w) service providers and community resources for victims of partner abuse who are in same-sex relationships?	1 4%	3 12%	**5 19%**
4.4	Is the partner abuse training provided by: (*choose one a-d and answer e-f*)			
	a) no training provided	12 48%	11 44%	**8 30%**
	b) a single individual?	2 8%	2 8%	**8 30%**
	c) a team of hospital employees only? List departments represented:	0 0%	1 4%	**1 4%**
	d) a team, including community expert(s)?	11 44%	11 44%	**10 37%**
	If provided by a team, does it include:			
	e) a Māori representative?	7 28%	10 40%	**8 30%**
	f) a representative(s) of other ethnic/cultural groups?	2 8%	2 8%	**1 4%**

Category 5. Screening and Safety Assessment

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
5.1	Does the hospital use a standardized instrument, with at least 3 questions, to screen patients for partner abuse? If yes, is this instrument: (*choose one*)	3 12%	4 16%	**7 26%**
	a) included, as a separate form, in the clinical record?	0 0%	3 12%	**5 19%**
	b) incorporated as questions in the clinical record for all charts in ED or other out-patient area?	0 0%	0 0%	**0 0%**
	c) incorporated as questions in the clinical record for all charts in two or more out-patient areas?	0 0%	0 0%	**0 0%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	d) incorporated as questions in clinical record for all charts in out-patient and in-patient areas?	1 4%	1 4%	**3 11%**
5.2	What percentage of eligible patients have documentation of partner abuse screening (based upon random sample of charts in any clinical area)?			
	a) Not done or not applicable	23 92%	22 88%	**17 63%**
	b) 0% - 10%	0 0%	0 0%	**3 11%**
	c) 11% - 25%	2 8%	0 0%	**1 4%**
	d) 26% - 50%	0 0%	1 4%	**4 15%**
	e) 51% - 75%	0 0%	1 8%	**1 4%**
	f) 76% - 100%	0 0%	0 0%	**1 4%**
5.3	Is a standardized safety assessment performed and discussed with victims who screen positive for partner abuse? If yes, does this:	8 32%	7 28%	**15 60%**
	a) also assess the safety of any children in the victim's care?	7 28%	7 28%	**14 52%**

Category 6. Documentation

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
6.1	Does the hospital use a standardized documentation instrument to record known or suspected cases of partner abuse? If yes, does the form include:	3 12%	5 20%	**13 48%**
	a) information on the results of partner abuse screening?	1 4%	9 36%	**14 52%**
	b) the victim's description of current and/or past abuse?	2 8%	4 16%	**9 33%**
	c) the name of the alleged perpetrator and relationship to the victim?	1 4%	2 8%	**10 37%**
	d) a body map to document injuries?	3 12%	6 24%	**10 37%**
	e) information documenting the referrals provided to the victim?	1 4%	4 16%	**11 41%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	f) in the case of Māori, information documenting whether the individual was offered a Māori advocate?	0 0%	3 12%	**5 19%**
6.2	Is forensic photography incorporated in the documentation procedure? If yes:	8 32%	9 36%	**10 37%**
	a) Is a fully operational camera with adequate film available in the treatment area?	1 4%	7 28%	**11 41%**
	b) Do hospital staff receive on-going training on the use of the camera?	2 8%	2 8%	**8 30%**
	c) Do hospital staff routinely offer to photograph all abused patients with injuries?	1 4%	1 4%	**2 7%**
	d) Is a specific, unique consent-to-photograph form obtained prior to photographing any injuries?	5 20%	12 48%	**17 63%**
	e) Do medical or nursing staff (not social work or a partner abuse advocate) photograph all injuries for medical documentation purposes, even if police obtain their own photographs for evidence purposes?	0 0%	1 4%	3 11%

Category 7. Intervention Services

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
7.1	Is there a standard intervention checklist for staff to use/refer to when victims are identified?	7 28%	7 28%	**16 59%**
7.2	Are "on-site" victim advocacy services provided? If yes, *choose one a-b and answer c-d)*:	13 52%	20 80%	**24 89%**
	a) A trained victim advocate provides services during certain hours.	7 28%	8 32%	**7 26%**
	b) A trained victim advocate provides service at all times.	6 24%	12 48%	**17 63%**
	c) is a Māori advocate is available "on-site" for Māori victims?	8 32%	14 56%	**20 74%**
	d) is an advocate(s) of ethnic and cultural background other than Pakeha and Māori is available onsite? If yes, list ethnicity:	3 12%	6 24%	**9 33%**
7.3	Are mental health/psychological assessments performed within the context of the programme? If yes, are they: (*choose one*)	14 56%	15 60%	**20 74%**
	a) available, when indicated?	8 32%	13 52%	**17 63%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	b) performed routinely?	6 24%	2 8%	**3 11%**
7.4	Is transportation provided for victims, if needed?	3 12%	6 24%	**6 22%**
7.5	Does the hospital partner abuse programme include follow-up contact and counselling with victims after the initial assessment?	11 44%	14 56%	**12 44%**
7.6	Does the hospital partner abuse programme offer and provide on-site legal options counselling for victims?	13 52%	12 48%	**12 44%**
7.7	Does the hospital partner abuse programme offer and provide partner abuse services for the children of victims?	15 60%	17 68%	**23 85%**
7.8	Is there evidence of coordination between the hospital partner abuse programme and sexual assault, mental health and substance abuse screening and treatment?	8 32%	13 52%	**19 70%**

Category 8. Evaluation Activities

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
8.1	Are any formal evaluation procedures in place to monitor the quality of the partner abuse programme? If yes:	8 32%	8 32%	**15 56%**
	a) Do evaluation activities include periodic monitoring of charts to audit for partner abuse screening? Participating departments:	2 8%	3 12%	**9 33%**
	b) Do evaluation activities include peer-to-peer case reviews around partner abuse? Participating departments:	2 8%	5 20%	**6 22%**
8.2	Do health care providers receive standardized feedback on their performance and on patients?	1 4%	3 12%	**7 26%**
8.3	Is there any measurement of client satisfaction and/or community satisfaction with the partner abuse programme?	2 4%	1 4%	**4 15%**
8.4	Is the quality framework *He Taura Tieke* (or an equivalent) used to evaluate whether services are effective for Māori?	2 8%	1 4%	**3 11%**

Category 9. Collaboration

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
9.1	Does the hospital collaborate with local partner abuse programmes? If yes,	22 88%	24 96%	**24** **89%**
	a) which types of collaboration apply:			
	i) collaboration with training?	9 36%	15 60%	**15** **55%**
	ii) collaboration on policy and procedure development?	11 44%	17 68%	**20** **74%**
	iii) collaboration on partner abuse working group?	6 24%	18 72%	**21** **78%**
	iv) collaboration on site service provision?	10 40%	18 72%	**21** **78%**
	b) is collaboration with			
	i) Māori provider(s) or representative(s)?	18 72%	23 92%	**23** **85%**
	iii) Provider(s) or representative(s) for ethnic or cultural groups other than Pakeha or Māori?	4 16%	9 36%	**12** **44%**
	c) List collaborating partner abuse programmes:			
9.2	Does the hospital collaborate with local police and courts in conjunction with their partner abuse programme? If yes, which types of collaboration apply:	16 64%	20 80%	**20** **74%**
	a) collaboration with training?	4 16%	12 48%	**14** **52%**
	b) collaboration on policy and procedure development?	5 20%	14 56%	**16** **59%**
	c) collaboration on partner abuse working group?	3 12%	18 72%	**19** **70%**
	c) List collaborating agencies (eg., police, courts):			
9.3	Is there collaboration with the partner abuse programme of other health care facilities? If yes, which types of collaboration apply:	21 84%	22 88%	**24** **89%**
	a) within the same health care system?	13 52%	19 76%	**22** **82%**
	If yes, with a Māori health unit?	12 48%	18 72%	**21** **78%**
	b) with other systems in the region?	18 72%	21 21%	**19** **70%**
	If yes, with a Māori health provider?	2 8%	13 52%	**19** **70%**

Appendix F: *Child Abuse and Neglect Delphi Tool Item Analysis*

Category 1. Hospital Policies and Procedures

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
1.1	Are there official, written hospital policies regarding the clinical assessment, appropriate questioning, and treatment of suspected abused and neglected children? If yes, do these policies:	23 92%	24 96%	27 100%
	a) define child abuse and neglect?	17 68%	21 84%	26 96%
	b) mandate training on child abuse and neglect for any staff?	8 32%	8 32%	21 78%
	c) outline age-appropriate protocols for risk assessment?	5 20%	5 20%	11 41%
	d) define who is responsible for risk assessment?	19 76%	22 88%	25 93%
	e) address the issue of contamination?	11 44%	16 64%	20 74%
	f) address documentation?	21 84%	23 92%	26 96%
	g) address referrals for children and their families?	22 88%	24 96%	27 100%
	h) address child protection reporting requirements?	19 76%	19 76%	26 96%
	i) address the responsibilities to, and needs of, Māori?	14 56%	16 64%	23 85%
	i) address the needs of other cultural and/or ethnic groups?	12 48%	15 60%	15 56%
1.2	Is there evidence of a hospital-based child abuse and neglect working group? If yes, does the working group:	12 48%	19 76%	24 89%
	a) meet at least every month?	10 40%	15 60%	17 63%
	b) include representatives from more than two departments? List represented departments:	12 48%	18 72%	24 89%
	c) include representative(s) from the security department?	2 8%	4 16%	6 22%
	d) include physician(s) from the medical staff?	11 44%	17 68%	23 85%
	e) include representative(s) from Child Youth and Family?	3 12%	8 32%	16 59%
	f) include representative(s) from hospital administration?	11 44%	16 64%	19 70%
	g) include representative(s) from an agency or programme involved in partner abuse advocacy?	2 8%	5 20%	12 44%

	"YES" responses	**Baseline n %**	**12 mo FU n %**	**30 mo FU n %**
	h) include representative(s) from community-based children's services?	1 4%	7 28%	14 52%
	i) include at least two youth representatives?	0 0%	1 4%	1 4%
	j) include Māori representative(s)?	10 40%	16 64%	18 67%
1.3	Does the hospital provide direct financial support for the child abuse and neglect programme? If yes, how much annual funding? (*Choose one of a-c and answer d*):	17 68%	19 76%	23 85%
	a) < $5000/year	2 8%	0 0%	1 4%
	b) $5000-$10,000/year	1 4%	3 12%	1 4%
	c) > $10,000/year	14 56%	16 64%	21 78%
	d) Is funding set aside specifically for Māori programmes and initiatives? If yes, how much annual funding?	5 20%	2 8%	4 15%
	i) < $5000/year	3 12%	1 4%	1 4%
	ii) > $5000/year	2 8%	1 4%	3 11%
1.4	Is there a clinical assessment policy for identifying signs and symptoms of child abuse and neglect and for identifying children at high risk? If yes, does the policy include children: (choose one)	23 92%	24 96%	24 89%
	a) in the emergency department (ED) or any other out-patient area?	1 4%	3 12%	3 11%
	b) in in-patient units only?	0 0%	0 0%	0 0%
	c) in more than one out-patient area?	1 4%	1 4%	1 4%
	d) in both in-patient and out-patient areas? List departments:	21 84%	20 80%	20 74%
1.5	Are there quality assurance procedures in place to ensure the clinical assessment policy for identifying child abuse and neglect is implemented? If yes:	18 72%	18 72%	13 48%
	a) are there regular chart audit to assess whether signs and symptoms of child abuse and neglect are investigated? List departments:	5 20%	6 24%	5 19%

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	b) is there regular peer review? List departments:	12 48%	14 56%	13 48%
	c) is there regular supervision? List departments:	11 44%	11 44%	13 48%
	d) is there regular feedback from Child Youth and Family (CYF)?	18 72%	16 64%	21 78%
1.6	Are there procedures for security measures to be taken when suspected cases of child abuse and neglect are identified and the child is perceived to be at immediate risk? If yes, are there:	12 48%	12 48%	17 63%
	a) written procedures that outline the security department's role in working with victims and their families and perpetrators?	4 16%	10 40%	13 48%
	b) procedures that include name/phone block for children and their families admitted to hospital?	1 4%	3 12%	6 22%
	c) procedures that include provisions for safe transport from the hospital to shelter?	2 8%	5 20%	3 11%
	d) do these procedures take into account the needs of Māori?	2 8%	4 16%	7 26%
1.7	Is there an identifiable child protection coordinator at the hospital? If yes is it a: (*choose one*)	14 56%	16 64%	19 70%
	a) part time position or included in responsibilities of someone with other responsibilities?	9 36%	12 48%	15 56%
	b) full-time position with no other responsibilities?	5 20%	4 16%	4 15%

Category 2. Hospital Physical Environment

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
2.1	Are posters and images that are of relevance to children and young people on public display in the hospital so as to create a 'child-friendly' environment?	25 100%	25 100%	27 100%
	If yes, total number of *locations* (up to 35): 0	0 0%	0 0%	0 0%
	1-2	4 16%	2 8%	0 0%

	"YES" responses		Baseline n %	12 mo FU n %	30 mo FU n %
		3-5	7 28%	7 28%	3 11%
		6-10	3 12%	7 28%	8 30%
		11-20	9 36%	7 28%	12 44%
		35	2 8%	2 8%	4 15%
	Are there posters and/or brochures related to child abuse and neglect, including posters and/or brochures about children's rights, on public display in the hospital?		24 96%	25 100%	27 100%
	If yes, total number of *locations* (up to 35):	0	1 4%	0 0%	0 0%
		1-2	4 16%	2 8%	1 4%
		3-5	7 28%	8 32%	2 8%
		6-10	10 40%	8 32%	7 26%
		11-20	2 8%	4 16%	11 41%
		35	1 4%	3 4%	6 22%
	Are there Māori images related to child abuse and neglect on public display in the hospital?		18 72%	22 88%	26 96%
	If yes, total number *locations (up to 17)*	0	7 28%	3 12%	1 4%
		1-2	11 44%	11 44%	5 19%
		3-5	4 16%	4 16%	5 19%
		6-10	2 8%	4 16%	6 22%
		11-17	1 4%	3 12%	7 26%
		17-20 (added at 30 month FU)			3 11%
2.2	Is there referral information (local or national phone numbers) related to child advocacy and therapeutic services on public display in the hospital? (Can be included on the posters/brochure noted above).		21 84%	21 84%	26 96%
	If yes, total number *locations* (up to 35):	0	4 16%	4 16%	1 4%
		1-2	10 40%	5 20%	2 7%
		3-4	6 24%	8 32%	6 22%

"YES" responses		Baseline n %	12 mo FU n %	30 mo FU n %
	5-10	3 12%	6 24%	8 30%
	11-20	1 4%	1 4%	6 22%
	20-35	1 4%	1 4%	4 15%
Is there referral information related to Māori providers of child advocacy services on public display in the hospital?		8 32%	9 36%	17 63%
If yes, list total number *locations (up to 17)* List number per department:	0	17 68%	16 64%	10 37%
	1-2	5 8%	7 28%	6 22%
	3-5	2 8%	1 4%	2 7%
	6-10	0 0%	0 0%	5 19%
	11-17	1 4%	1 4%	4 15%
Is there referral information related to child advocacy services for particular ethnic or cultural group (other than Māori or Pakeha) on public display in the hospital?		3 12%	3 12%	7 26%
If yes, total number *locations (up to 17)*	0	22 88%	22 88%	20 74%
	1-2	2 8%	2 8%	4 15%
	3-4	0 0%	0 0%	1 4%
	5-10	1 4%	0 0%	0 0%
	11-17	0 0%	1 4%	2 7%
2.3 Does the hospital provide temporary (<24 hours) safe shelter for victims of child abuse and neglect and their families who cannot go home or cannot be placed in a community-based shelter? If yes: (*choose one a-c and answer d*)		15 60%	19 76%	17 63%
a) Children and their families are permitted to stay in ED until placement is secured.		1 4%	0 0%	0 0%
b) Children and their families are provided with safe respite room, separate from ED, until placement is secured.		0 0%	0 0%	0 0%
c) In-patient beds are available for children and their families until placement is secured.		14 56%	19 76%	17 63%
d) Does the design and use of the safe shelter support Māori cultural beliefs and practices?		17 68%	17 68%	14 52%

Category 3. Institutional Culture

	"YES" responses	**Baseline n %**	**12 mo FU n %**	**30 mo FU n %**
3.1	In the last 3 years, has there been a formal (written) assessment of the hospital staff's knowledge and attitude about child abuse and neglect? If yes, which groups have been assessed?	6 24%	11 44%	**11 41%**
	a) nursing staff Participating Departments:	6 24%	10 40%	**11 41%**
	b) medical staff Participating Departments:	5 20%	7 28%	**7 26%**
	c) administration	2 8%	8 32%	**6 22%**
	d) other staff/employees	2 8%	9 36%	**9 33%**
	If yes, did the assessment address staff knowledge and attitude about Māori and child abuse and neglect?	0 0%	1 4%	**1 4%**
3.2	How long has the hospital's child abuse and neglect programme been in existence? (*Choose one*):			
	a) 1-24 months	7 28%	5 20%	**2 7%**
	b) 24-48 months	5 20%	7 28%	**5 19%**
	c) >48 months	9 36%	13 52%	**20 74%**
3.3	Does the hospital's child abuse and neglect programme address cultural competency issues? If yes:	23 92%	25 100%	**27 100%**
	a) Does the hospital's policy specifically require implementation of the child abuse and neglect clinical assessment policy regardless of the child's cultural background?	18 72%	18 72%	**27 100%**
	b) Are cultural issues discussed in the hospital's child abuse and neglect training programme?	17 68%	16 64%	**19 70%**
	c) Are translators/interpreters available for working with victims if English is not the victim's first language?	23 92%	25 100%	**27 100%**
	d) Are referral information and brochures related to child abuse and neglect available in languages other than English?	8 32%	8 32%	**12 44%**
3.4	Does the hospital participate in preventive outreach and public education activities on the topic of child abuse and neglect? If yes, is there documentation of: (*choose a or b and answer c)*	19 76%	15 60%	**8 30%**
	a) 1 programme in the last 12 months?	9 36%	4 16%	**9 33%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	b) >1 programme in the last 12 months?	10 40%	11 44%	**10 37%**
	c) Does the hospital collaborate with Māori community organizations and providers to deliver preventive outreach and public education activities?	9 36%	9 36%	**14 52%**

Category 4. Training of Providers

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
4.1	Has a formal training plan been developed for the institution? If yes:	5 20%	10 40%	**17 63%**
	a) Does the plan include the provision of regular, ongoing education for clinical staff? Participating Departments:	5 20%	11 44%	**17 63%**
	b) Does the plan include the provision of regular, ongoing education for non-clinical staff?	2 8%	10 40%	**15 56%**
4.2	During the past 12 months, has the hospital provided training on child abuse and neglect:			
	a) as part of the mandatory orientation for new staff? Participating departments:	7 28%	6 24%	**15 56%**
	b) to members of the clinical staff via colloquia or other sessions?	8 32%	20 80%	**23 85%**
4.3	Does the hospital's training/education on child abuse and neglect include information about:			
	a) definitions of child abuse and neglect?	17 68%	21 84%	**22 82%**
	b) dynamics of child abuse and neglect?	16 64%	21 84%	**21 78%**
	c) child advocacy	16 64%	20 80%	**17 63%**
	d) child-focused interviewing	12 48%	17 68%	**14 52%**
	e) issues of contamination	12 48%	18 72%	**17 63%**
	f) ethical dilemmas?	11 44%	19 76%	**20 74%**
	g) conflict of interest	11 44%	17 68%	**18 67%**
	h) epidemiology?	15 60%	18 72%	**20 74%**
	i) health consequences?	17 68%	20 80%	**19 70%**
	j) identifying high risk indicators?	16 64%	21 84%	**21 78%**

	"YES" responses	**Baseline n %**	**12 mo FU n %**	**30 mo FU n %**
	k) physical signs and symptoms?	15 60%	21 84%	**20 74%**
	l) documentation?	15 60%	20 80%	**20 74%**
	m) intervention?	16 64%	21 84%	**20 74%**
	n) safety planning?	13 52%	18 72%	**14 52%**
	o) community resources?	14 56%	19 76%	**16 59%**
	p) child protection reporting requirements?	17 68%	21 84%	**18 67%**
	q) linking with Child Youth and Family?	17 68%	21 84%	**20 74%**
	r) confidentiality?	13 52%	18 72%	**18 67%**
	s) age appropriate assessment and intervention?	11 44%	18 72%	**14 52%**
	t) cultural competency?	11 44%	13 52%	**13 48%**
	u) link between partner violence and child abuse and neglect?	15 60%	19 76%	**20 74%**
	v) Māori models of health?	13 12%	6 24%	**9 33%**
	w) the social, cultural, historic, and economic context in which Māori family violence occurs?	3 24%	9 36%	**8 30%**
	x) te Tiriti o Waitangi?	6 20%	10 40%	**7 26%**
	y) Māori service providers and community resources?	5 36%	15 60%	**14 52%**
	z) Service providers and community resources for ethnic and cultural groups other than Pakeha and Māori?	9 20%	10 40%	**8 30%**
4.4	Is the child abuse and neglect training provided by: (*choose one of a-d and answer e-f)*			
	a) no training provided	5 20%	3 12%	**2 7%**
	b) a single individual?	5 16%	3 12%	**6 22%**
	c) a team of hospital employees only? List departments represented:	4 28%	5 20%	**2 7%**
	d) a team, including community expert(s)?	7 36%	14 56%	**17 63%**
	If provided by a team, does it include:			
	e) a Child Youth and Family statutory social worker?	12 48%	15 60%	**18 67%**

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
	f) a Māori representative?	10 40%	9 36%	**15 56%**
	g) a representative(s) of other ethnic/cultural groups?	4 16%	2 8%	**1 4%**

Category 5. Documentation

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
5.1	Does the hospital use a standardized documentation instrument to record known or suspected cases of child abuse and neglect? If yes, does the form include:	13 52%	15 60%	21 78%
	a) information generated by risk assessment?	7 28%	9 36%	15 56%
	b) the victim or caregiver's description of current and/or past abuse?	8 32%	9 36%	13 48%
	c) the name of the alleged perpetrator and relationship to the victim?	4 16%	5 20%	8 30%
	d) a body map to document injuries?	11 40%	16 64%	20 74%
	e) information documenting the referrals provided to the victim and their family?	9 36%	10 40%	17 63%
	f) in the case of Māori, information documenting whether the victim and their family were offered a Māori advocate?	4 16%	4 16%	4 15%
5.2	Is a standardised safety assessment performed for children? If yes:	10 40%	13 52%	17 63%
	a) Does this also assess the safety of the child's mother?	6 24%	4 16%	9 33%

Category 6. Intervention Services

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
6.1	Is there a standard intervention checklist for staff to use/refer to when suspected cases of child abuse and neglect are identified?	17 68%	21 84%	27 100%
6.2	Are child protection services available "on-site"? If yes, *choose one of a-b and answer c-d*:	23 92%	24 96%	26 96%
	a) A member of the child protection team or social worker provides services during certain hours.	7 28%	12 48%	10 37%

	"YES" responses	**Baseline n %**	**12 mo FU n %**	**30 mo FU n %**
	b) A member of the child protection team or social worker provides service at all times.	16 64%	12 48%	16 59%
	c) A Māori advocate or social worker is available "on-site" for Māori victims.	20 80%	21 84%	23 85%
	d) An advocate of ethnic and cultural background other Pakeha and Māori is available onsite. If yes, list ethnicity:	9 36%	10 40%	12 44%
6.3	Are mental health/psychological assessments performed within the context of the programme? If yes, are they: (*choose a or b and answer c*)	19 76%	20 80%	23 85%
	a) available, when indicated?	13 52%	16 64%	16 59%
	b) performed routinely?	6 24%	4 16%	7 26%
	c) age-appropriate?	19 76%	21 84%	23 85%
6.4	Is transportation provided for victims and their families, if needed?	3 12%	9 36%	10 37%
6.5	Does the hospital child abuse and neglect programme include follow-up contact and counselling with victims after the initial assessment?	17 68%	20 80%	20 74%
6.6	Does the hospital child abuse and neglect programme offer and provide on-site legal options counselling for the families of suspected child abuse and neglect victims?	19 76%	13 52%	10 37%
6.7	Does the hospital child abuse and neglect programme offer and provide family violence intervention services for the families, and in particular mothers, of abused children?	8 32%	13 52%	16 59%
6.8	Is there evidence of coordination between the hospital child abuse and neglect programme and the partner abuse and sexual assault programmes?	18 72%	20 80%	24 89%
6.9	Is there evidence of coordination with CYF?	21 84%	22 88%	25 93%

Category 7. Evaluation Activities

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
7.1	Are any formal evaluation procedures in place to monitor the quality of the child abuse and neglect programme? If yes:	15 60%	17 68%	18 67%
	a) Do evaluation activities include periodic monitoring of the implementation of the child abuse and neglect clinical assessment policy? Participating departments:	6 24%	12 48%	9 33%
	b) Is the evaluation process standardised? Participating departments:	11 44%	10 40%	9 33%
	c) Do evaluation activities measure outcomes, either for entire child abuse and neglect programme or components thereof?	7 28%	9 36%	14 52%
7.2	Do health care providers receive standardized feedback on their performance and on patients from CYF?	14 56%	12 48%	12 44%
7.3	Is there any measurement of client satisfaction and/or community satisfaction with the child abuse and neglect programme?	2 8%	1 4%	7 26%
7.4	Is the quality framework *He Taura Tieke* (or an equivalent) used to evaluate whether services are effective for Māori?	2 8%	1 4%	2 7%

Category 8. Collaboration

	"YES" responses	Baseline n %	12 mo FU n %	30 mo FU n %
8.1	Does the hospital collaborate with NGO and CYF child advocacy and protection ? If yes,	23 92%	24 96%	**27 100%**
	a) which types of collaboration apply:			
	i) collaboration with training?	15 60%	19 76%	**21 78%**
	ii) collaboration on policy and procedure development?	17 68%	17 68%	**23 85%**
	iii) collaboration on child abuse and neglect task force?	5 20%	19 76%	**20 74%**
	iv) collaboration on site service provision?	16 64%	22 88%	**22 82%**
	b) is collaboration with:			
	i) Māori provider(s) or representative(s)?	19 76%	21 84%	**22 82%**
	ii) Provider(s) or representative(s) for ethnic or cultural groups other than Pakeha or Māori?	6 24%	8 32%	**8 30%**
	List collaborating organisations:			

	"YES" responses	**Baseline n %**	**12 mo FU n %**	**30 mo FU n %**
8.2	Does the hospital collaborate with police and prosecution agencies in conjunction with their child abuse and neglect programme? If yes, which types of collaboration apply:	23 92%	24 96%	**25 93%**
	a) collaboration with training?	5 20%	11 44%	**17 63%**
	b) collaboration on policy and procedure development?	10 40%	11 44%	**18 67%**
	c) collaboration on child abuse and neglect task force?	4 16%	18 72%	**20 74%**
	List collaborating agencies:			
8.3	Is there collaboration with the child abuse and neglect programme of other health care facilities? If yes, which types of collaboration apply:	20 80%	21 84%	**25 93%**
	a) within the same health care system?	17 68%	23 92%	**26 96%**
	If yes, with a Māori health unit?	11 44%	22 88%	**23 85%**
	b) with other systems in the region?	20 80%	20 80%	**21 78%**
	If yes, with a Māori health provider?	6 24%	17 68%	**23 85%**

Appendix G: *Trend Analysis*

Table 1. Partner Abuse Audit Trend Analysis

		No.	Estimated Mean Score	SE	p-value
Time	Baseline	25	21.19	3.63	
	12 months	25	32.28	4.37	
	30 months	25	43.55	5.20	<0.001
Urban*	Main urban population >30,000	51 (17)	34.32	4.73	
	Secondary and minor urban ≤30,000	24 (8)	28.13	6.66	0.44
Bed-size*	> 100 beds	57 (19)	35.87	4.37	
	≤100 beds	18 (6)	21.16	7.29	0.08

*adjusted for time effect

Table 2. Partner Abuse Univariate repeated measures models

	df	F	p-value
Time	2, 24	38.96	<0.001
Maturation	3, 24	8.69	0.0006
Maturation x Time	6, 24	5.73	0.001
Time	2, 24	20.25	<0.001
Partner Abuse Coordinator	2, 24	32.82	<0.001
Partner Abuse Coordinator x Time	4, 24	11.97	<0.001
Time	2, 24	30.97	<0.001
Dual Role	2, 24	27.20	<0.001
Dual Role x Time	4, 24	8.10	0.0003

Note: Adjusted for subject, interaction and main effects and standard errors of the estimates

Table 3. Partner Abuse Estimated mean scores adjusted for subject, time and interaction effects.

		Time	No.	Estimated Mean Score	SE
Programme Maturation at 30 months	No Programme	Baseline	7	10.42	5.62
		12 months	7	14.76	6.72
		30 months	7	11.57	6.08
	1-24 months	Baseline	7	15.88	5.62
		12 months	7	27.09	6.72
		30 months	7	52.12	6.08
	24-48 months	Baseline	8	25.88	5.25
		12 months	8	44.15	6.29
		30 months	8	53.66	5.69
	>48 months	Baseline	3	47.72	8.58
		12 months	3	53.66	10.27

		Time	No.	Estimated Mean Score	SE
		30 months	3	71.14	9.28
Partner Abuse Intervention Coordinator	None	Baseline	13	19.15	3.88
		12 months	9	18.48	3.64
		30 months	9	21.73	4.32
	Part Time	Baseline	11	21.99	4.03
		12 months	15	37.80	3.35
		30 months	14	53.39	3.89
	Full Time	Baseline	1	39.00	12.85
		12 months	1	73.81	10.75
		30 months	2	72.77	8.60
Dual Role	No Coordinator	Baseline	13	18.85	3.94
		12 months	9	18.01	3.93
		30 months	9	21.56	4.27
	Yes	Baseline	6	24.99	5.14
		12 months	10	40.52	3.97
		30 months	10	59.46	4.26
	No	Baseline	6	22.49	5.01
		12 months	6	39.98	4.61
		30 months	6	50.00	5.18

Table 4. Child abuse and neglect Audit Trend Analysis

		No. (No. Clinics)	Estimated Mean	SE	p-value
Time	Baseline	25	40.62	3.88	
	12 months	25	49.47	3.69	
	30 months	25	56.49	3.41	<0.0001
Urban	Main urban population >30,000	51 (17)	53.39	3.87	
	Secondary and minor urban ≤30,000	24 (8)	39.24	5.57	0.05
Bed-size	≤ 100 beds	18 (6)	37.14	6.37	
	> 100 beds	57 (19)	52.56	3.60	0.05
Programme Maturation at 30 months	No Program	6 (2)	16.37	9.98	
	1-24 months	-	-	-	
	24-48 moths	3 (1)	58.35	14.08	
	>48 months	66 (22)	51.38	3.15	0.009
Child Abuse Co-ordinator	None	25	37.83	3.32	
	Part-Time	37	50.63	3.05	
	Full-Time	13	65.04	5.32	<0.0001
Dual Role	No Co-ordinator	25	44.50	3.60	
	Yes	26	53.85	3.90	
	No	25	49.18	4.40	0.03