

# **Indicators for the Well Child / Tamariki Ora Quality Improvement Framework**

March 2014

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# Foreword from the EAG

The Well Child / Tamariki Ora Quality Improvement Framework Expert Advisory Group<sup>1</sup> (EAG) welcome this second report on the indicators for the Quality Improvement Framework. We acknowledge the Well Child / Tamariki Ora (WCTO) sector's commitment to improving services for children and their families. We see the WCTO Quality Improvement Framework as a tool to support each level of the sector to achieve family-centred, high-quality, equitable and effective child health services that deliver the best possible health outcomes for all New Zealand children and their families.

The stars are aligned as never before in child health. Child health is a leading Government priority and is amassing a wealth of evidence for greater investment. Service provider capacity and capability are growing. Technology is enabling greater innovation and integration. Family-centred care – a fundamental principle of WCTO – is demonstrating efficacy in improving outcomes, equity and cost effectiveness.

We recognise that achieving the Triple Aim of the WCTO Quality Improvement Framework is an ambitious and long-term goal. At first glance this large list of indicators may appear daunting. We are also aware that many other important indicators are absent, often due to our current inability to measure aspects of child health accurately. However, the idea of utilising a range of indicators as a starting point is for every one of us, at every level of service provision, to focus on maintaining or improving our services to achieve better outcomes for children and their families.

This is the second report, so we are now able to have our first picture of progress over time. There are some impressive gains, such as the progress towards the immunisation coverage, particularly with the reductions in equity gaps. Community oral health enrolment rates show real progress, although dental decay outcomes tell us there is still a long way to go. The targets for many of our B4 School Check referrals are excellent and improving, and we can celebrate, in particular, the consistent 100 percent referral of hearing and vision problems. Areas that need further focus include breastfeeding, child obesity and maternal tobacco use. An area of particular concern to us as the EAG is the low rate of newborn enrolment with general practice. This is an important issue that can benefit from attention from all of us.

Nelson Mandela wrote, 'There can be no keener revelation of a society's soul than the way in which it treats its children'. We, the EAG, issue a challenge as you read this report and consider what the results mean for you: think about what you can do to help build a system that treats our children as taonga and ensures we work in partnership with families to help them grow strong, healthy and resilient.

We must use the resources and skills we collectively possess to achieve this. The WCTO Quality Improvement Framework, quality indicators and local quality improvement programmes are the foundations. Using these, together with our committed and skilled child health workforce and the strong Government commitment to child health, we can build towards world-leading health outcomes for all New Zealand children and their families.

<sup>1</sup> Membership of the EAG is set out in Appendix 2.



# Summary of national results

Quality indicator	September 2013				March 2014			
	Total (%)	High dep (%)	Māori (%)	Pacific (%)	Total (%)	High dep (%)	Māori (%)	Pacific (%)
Newborns are enrolled with a general practice by 3 months	66	n/a	65	70	63	n/a	65	62
Families/whānau are referred from their Lead Maternity Carer to a WCTO provider	97	97	97	97	97	97	97	97
Infants receive all WCTO core contacts due in their first year	74	66	65	65	74	66	65	65
4-year-olds receive a B4 School Check	80	80	71	68	89	85	81	74
Children are enrolled with child oral health services	63	n/a	n/a	n/a	70	n/a	55	66
Immunisations are up to date by 8 months	90	87	84	92	91	90	88	93
Children participate in early childhood education	96	88	92	89	96	89	93	89
Children under 6 have access to free primary care	97	99	99	99	98	99	99	100
Children under 6 have access to free after-hours primary care	97	n/a	n/a	n/a	98	n/a	n/a	n/a
Children are seen promptly by specialist services	100	n/a	n/a	n/a	99	n/a	n/a	n/a
Infants are exclusively or fully breastfed at 2 weeks	79	76	77	77	80	77	78	76
Infants are exclusively or fully breastfed at 6 weeks	76	73	71	77	76	73	71	75
Infants are exclusively or fully breastfed at 3 months	55	44	43	48	55	43	44	45
Infants are receiving breast milk at 6 months	64	55	52	60	65	55	52	59
Children are a healthy weight at 4 years	77	69	72	59	75	68	70	58
Children are caries free at 5 years	60	n/a	41	35	59	n/a	39	37
The burden of dental decay is minimised (average dmft)	4.5	n/a	5.1	5.3	4.5	n/a	5.1	5
Child mental health is supported (normal SDQ-P score)	96	93	93	95	96	93	93	94
Mothers are smokefree at 2 weeks postnatal	87	76	65	90	86	75	64	90
Children live in smokefree homes (age 4 years)	98	96	96	97	98	97	96	98
B4 School Checks are started before children are 4½	83	81	77	84	82	80	77	81
Children with an abnormal SDQ-P score are referred*	92	92	90	94	100	100	100	100
Children with a PEDS pathway A are referred*	94	93	94	95	97	97	98	94
Children with a Lift the Lip (Oral Health) score of 2–6 are referred	51	54	57	50	59	66	64	64

Quality indicator	September 2013				March 2014			
	Total (%)	High dep (%)	Māori (%)	Pacific (%)	Total (%)	High dep (%)	Māori (%)	Pacific (%)
Children with an untreated vision problem are referred	100	100	100	100	100	100	100	100
Children with an untreated hearing problem are referred	100	100	100	100	100	100	100	100
Children with a Body Mass Index > 99.4th percentile are referred	63	63	57	62	69	74	59	74

Note: dmft = count of decayed, missing or filled deciduous teeth, PEDS = Parental Evaluation of Developmental Status, SDQ-P = Strengths and Difficulties Questionnaire (Parent), WCTO = Well Child / Tamariki Ora.

\* = includes 'advice given', all other referrals exclude 'advice given'. See full analysis for more information.

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# Contents

<b>Foreword from the EAG</b>	<b>iii</b>
<b>Summary of national results</b>	<b>v</b>
<b>Contents</b>	<b>vii</b>
<b>Introduction</b>	<b>1</b>
Background	1
Development of the quality indicators	1
Quality indicator targets	2
How to use this document	2
<b>Indicators 1–10: Access</b>	<b>3</b>
Summary of results for this period	3
WCTO Quality Improvement Framework Indicator 1	6
WCTO Quality Improvement Framework Indicator 2	8
WCTO Quality Improvement Framework Indicator 3	10
WCTO Quality Improvement Framework Indicator 4	12
WCTO Quality Improvement Framework Indicator 5	14
WCTO Quality Improvement Framework Indicator 6	16
WCTO Quality Improvement Framework Indicator 7	18
WCTO Quality Improvement Framework Indicator 8	20
WCTO Quality Improvement Framework Indicator 9	22
WCTO Quality Improvement Framework Indicator 10	23
<b>Indicators 11–20: Outcomes</b>	<b>24</b>
Summary of results for this period	24
WCTO Quality Improvement Framework Indicator 11	26
WCTO Quality Improvement Framework Indicator 12	28
WCTO Quality Improvement Framework Indicator 13	30
WCTO Quality Improvement Framework Indicator 14	32
WCTO Quality Improvement Framework Indicator 15	34
WCTO Quality Improvement Framework Indicator 16	36
WCTO Quality Improvement Framework Indicator 17	38
WCTO Quality Improvement Framework Indicator 18	40
WCTO Quality Improvement Framework Indicator 19	42
WCTO Quality Improvement Framework Indicator 20	44

<b>Indicators 21–27: Quality</b>	<b>46</b>
Summary of results for this period	46
WCTO Quality Improvement Framework Indicator 21	48
WCTO Quality Improvement Framework Indicator 22	50
WCTO Quality Improvement Framework Indicator 23	52
WCTO Quality Improvement Framework Indicator 24	54
WCTO Quality Improvement Framework Indicator 25	56
WCTO Quality Improvement Framework Indicator 26	58
WCTO Quality Improvement Framework Indicator 27	60

<b>Appendix 1: Summary of the WCTO quality indicators</b>	<b>62</b>
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<b>Appendix 2: Membership of the WCTO Quality Improvement Framework Expert Advisory Group</b>	<b>63</b>
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### List of Figures

Figure 1: Newborns enrolled with a PHO by three months, total New Zealand	6
Figure 2: Newborns enrolled with a PHO by three months, Māori	6
Figure 3: Newborns enrolled with a PHO by three months, Pacific	7
Figure 4: Referral from LMC to WCTO, total New Zealand	8
Figure 5: Referral from LMC to WCTO, high deprivation	8
Figure 6: Referral from LMC to WCTO, Māori	9
Figure 7: Referral from LMC to WCTO, Pacific peoples	9
Figure 8: Core WCTO contacts 1–5 received, total New Zealand	10
Figure 9: Core WCTO contacts 1–5 received, high deprivation	10
Figure 10: Core WCTO contacts 1–5 received, Māori	11
Figure 11: Core WCTO contacts 1–5 received, Pacific peoples	11
Figure 12: Children receive a B4 School Check, total New Zealand	12
Figure 13: Children receive a B4 School Check, high deprivation	12
Figure 14: Children receive a B4 School Check, Māori	13
Figure 15: Children receive a B4 School Check, Pacific peoples	13
Figure 16: Preschool children enrolled with oral health services, total New Zealand	14
Figure 17: Preschool children enrolled with oral health services, Māori	14
Figure 18: Preschool children enrolled with oral health services, Pacific peoples	15
Figure 19: Fully immunised by eight months, total New Zealand	16
Figure 20: Fully immunised by eight months, high deprivation	16
Figure 21: Fully immunised by eight months, Māori	17
Figure 22: Fully immunised by eight months, Pacific peoples	17
Figure 23: Prior participation in ECE, total New Zealand	18
Figure 24: Prior participation in ECE, high deprivation	18
Figure 25: Prior participation in ECE, Māori	19

Figure 26:	Prior participation in ECE, Pacific peoples	19
Figure 27:	Under-six access to free primary care, total New Zealand	20
Figure 28:	Under-six access to free primary care, high deprivation	20
Figure 29:	Under-six access to free primary care, Māori	21
Figure 30:	Under-six access to free primary care, Pacific peoples	21
Figure 31:	Under-six access to free after-hours primary care, total New Zealand	22
Figure 32:	Paediatric medicine first specialist appointment received within five months	23
Figure 33:	Exclusively or fully breastfed at two weeks, total New Zealand	26
Figure 34:	Exclusively or fully breastfed at two weeks, high deprivation	26
Figure 35:	Exclusively or fully breastfed at two weeks, Māori	27
Figure 36:	Exclusively or fully breastfed at two weeks, Pacific peoples	27
Figure 37:	Exclusively or fully breastfed at LMC discharge, total New Zealand	28
Figure 38:	Exclusively or fully breastfed at LMC discharge, high deprivation	28
Figure 39:	Exclusively or fully breastfed at LMC discharge, Māori	29
Figure 40:	Exclusively or fully breastfed at LMC discharge, Pacific peoples	29
Figure 41:	Exclusively or fully breastfed at three months, total New Zealand	30
Figure 42:	Exclusively or fully breastfed at three months, high deprivation	30
Figure 43:	Exclusively or fully breastfed at three months, Māori	31
Figure 44:	Exclusively or fully breastfed at three months, Pacific peoples	31
Figure 45:	Infants receive breast milk at six months, total New Zealand	32
Figure 46:	Infants receive breast milk at six months, high deprivation	32
Figure 47:	Infants receive breast milk at six months, Māori	33
Figure 48:	Infants receive breastmilk at six months, Pacific peoples	33
Figure 49:	Children are a healthy weight at age four years, total New Zealand	34
Figure 50:	Children are a healthy weight at age four years, high deprivation	34
Figure 51:	Children are a healthy weight at age four years, Māori	35
Figure 52:	Children are a healthy weight at age four years, Pacific peoples	35
Figure 53:	Caries free at five years, total New Zealand	36
Figure 54:	Caries free at five years, Māori	36
Figure 55:	Caries free at five years, Pacific peoples	37
Figure 56:	Burden of dental decay, total New Zealand	38
Figure 57:	Burden of dental decay, Māori	38
Figure 58:	Burden of dental decay, Pacific peoples	39
Figure 59:	Children have a normal SDQ-P score at four years, total New Zealand	40
Figure 60:	Children have a normal SDQ-P score at four years, high deprivation	40
Figure 61:	Children have a normal SDQ-P score at four years, Māori	41
Figure 62:	Children have a normal SDQ-P score at four years, Pacific peoples	41
Figure 63:	Mother smokefree at two weeks postnatal, total New Zealand	42
Figure 64:	Mother smokefree at two weeks postnatal, high deprivation	42
Figure 65:	Mother smokefree at two weeks postnatal, Māori	43
Figure 66:	Mother smokefree at two weeks postnatal, Pacific peoples	43

Figure 67:	Children live in a smokefree home (age four years), total New Zealand	44
Figure 68:	Children live in a smokefree home (age four years), high deprivation	44
Figure 69:	Children live in a smokefree home (age four years), Māori	45
Figure 70:	Children live in a smokefree home (age four years), Pacific peoples	45
Figure 71:	B4 School Check started before age 4½ years, total New Zealand	48
Figure 72:	B4 School Check started before age 4½ years, high deprivation	48
Figure 73:	B4 School Check started before age 4½ years, Māori	49
Figure 74:	B4 School Check started before age 4½ years, Pacific peoples	49
Figure 75:	Abnormal SDQ-P referred, total New Zealand	50
Figure 76:	Abnormal SDQ-P referred, high deprivation	50
Figure 77:	Abnormal SDQ-P referred, Māori	51
Figure 78:	Abnormal SDQ-P referred, Pacific peoples	51
Figure 79:	PEDS pathway A referred, total New Zealand	52
Figure 80:	PEDS pathway A referred, high deprivation	52
Figure 81:	PEDS pathway A referred, Māori	53
Figure 82:	PEDS pathway A referred, Pacific peoples	53
Figure 83:	Children with LTL score > 1 referred, total New Zealand	54
Figure 84:	Children with LTL score > 1 referred, high deprivation	54
Figure 85:	Children with LTL score > 1 referred, Māori	55
Figure 86:	Children with LTL score > 1 referred, Pacific peoples	55
Figure 87:	Vision problem referred, total New Zealand	56
Figure 88:	Vision problem referred, high deprivation	56
Figure 89:	Vision problem referred, Māori	57
Figure 90:	Vision problem referred, Pacific peoples	57
Figure 91:	Hearing problem referred, total New Zealand	58
Figure 92:	Hearing problem referred, high deprivation	58
Figure 93:	Hearing problem referred, Māori	59
Figure 94:	Hearing problem referred, Pacific peoples	59
Figure 95:	Children with BMI > 99.4th percentile referred, total New Zealand	60
Figure 96:	Children with BMI > 99.4th percentile referred, high deprivation	60
Figure 97:	Children with BMI > 99.4th percentile referred, Māori	61
Figure 98:	Children with BMI > 99.4th percentile referred, Pacific peoples	61

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# Introduction

## Background

Well Child / Tamariki Ora (WCTO) is a free health service offered to all New Zealand children from birth to five years. Its aim is to support families/whānau to maximise their child's developmental potential and health status, establishing a strong foundation for ongoing healthy development.

The 2007/08 review and the 2012 quality reviews of the WCTO programme identified variable clinical practice, service quality and health outcomes, and recommended that an evidence-based quality framework be developed to ensure the programme consistently achieves its aims.

In response, the Ministry of Health, in partnership with sector expert advisors, developed the WCTO Quality Improvement Framework, drawing on New Zealand and international research. The Framework has three high-level aims, which focus on family/whānau experience, population health, and best value for the health system's resources. The Framework also sets quality indicators to monitor health system performance.

The Framework and quality indicators provide a mechanism to drive improvement in the delivery of WCTO services. Ultimately, they aim to support the WCTO programme to ensure all children and their families/whānau achieve their health and wellbeing potential.

## Development of the quality indicators

The aim of the quality indicators is to monitor and promote quality improvement across WCTO providers without creating an additional reporting burden. As such, the quality indicators are a subset of potential measures drawn from existing data collections and reporting mechanisms.

The quality indicators are broadly grouped under the categories of:

- universal access
- equitable outcomes
- continuous quality improvement.

All quality indicators will be reported on by region, ethnicity and deprivation quintile, where possible, and the results will be published six-monthly. This is the second report of the quality indicators.

As information collection improves and the WCTO programme evolves, indicators may be added or changed. The Ministry of Health will review the quality indicators at least every three years.

# Quality indicator targets

Targets for the quality indicators reflect national targets set by other monitoring frameworks and processes, including health targets, district health board (DHB) non-financial performance monitoring and 'Better Public Service' key result areas.

Where there is no existing target, new three-year targets have been agreed by the Expert Advisory Group to best reflect the objectives of the Framework. New targets are staged to reflect the fact that improvements will be realised over time. Interim targets to be achieved by December 2014 are set at 90 percent of the three-year targets.

To promote equity, the target for each quality indicator is the same across all ethnic groups, deprivation quintiles and DHB regions

## How to use this document

Regular monitoring is an essential part of quality improvement. The quality indicators presented here enable WCTO providers, DHBs and other stakeholders to review local performance, identify quality improvement priorities, and monitor progress in improving the uptake, timeliness and quality of WCTO and related child health services over time.

The quality indicators do not stand alone: they are part of a whole-system approach to quality improvement that includes:

- standards (the WCTO Quality Improvement Framework)
- monitoring (quality indicator reports)
- support for collaboration and planning quality improvement priorities (DHB-led local WCTO quality improvement programmes)
- support for learning and sharing best practice (via the Child and Youth Compass and other tools and resources).

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# Indicators 1–10: Access

Aim 1 of the WCTO Quality Improvement Framework is **improved safety and quality experience for the child and family/whānau**. This can be measured, to some degree, by the uptake of and continued engagement with services, as families will be more likely to access and remain involved with acceptable, high-quality services that address barriers to access for families. It is expected that in addition to these indicators, DHBs and WCTO providers will consider other ways to monitor quality experience, such as through the use of consumer surveys or parent focus groups.

Indicators 1–10 measure access rates, with or without consideration of timeliness, across a range of universal and specialist services that contribute to improved outcomes for children. The inclusion of this broad range of services as indicators reflects the role of WCTO in assessing and supporting the health and developmental needs of a growing family. The core roles of WCTO in supporting the access indicators are to:

- facilitate and support a family's timely engagement with health services such as primary care, immunisation and oral health
- support referral to specialist services, where required
- support child development by discussing the importance of children participating in high-quality early childhood education.

## Summary of results for this period

### National

The data for this period highlights the continued progress made towards the immunisation health target, along with significant new progress towards the child oral health enrolment target of 86 percent and the new B4 School Check programme target of 90 percent. Overall, five of ten indicators showed improvement since the last report, three remained static and two (Indicator 1: Newborns are enrolled with a primary health organisation (PHO) by three months of age and Indicator 10: Paediatric medicine first specialist appointment received within five months) decreased in performance or coverage.

Indicator 1: Newborns are enrolled with a primary health organisation (PHO) by three months of age, currently sitting at 63 percent, remains significantly below the 88 percent target. Indicator 3: Core WCTO contacts 1–5 received at 74 percent also remains below the 88 percent target, having made no improvement since the last report. Indicator 5: Children are enrolled with child oral health services shows improvement since the last report, but at 70 percent still requires further improvement to reach the December 2014 target. The remaining indicators have met or are within five percentage points of their December 2014 targets in this report.

## **By region**

All DHB regions met two or more of the 2014 targets, with five DHBs meeting five of ten 2014 targets and one DHB (South Canterbury) meeting six of ten 2014 targets. Sixteen DHBs met the 2014 and 2016 targets for Indicator 8: Children under six have access to free primary care, which addresses a critical barrier to access for many families, up from 15 DHBs in the last report. As per the last report, only one DHB met the 2014 target for Indicator 5: Children are enrolled with child oral health services (Whanganui, at 89 percent), although this represents a drop of three percentage points for this DHB since the last report.

## **By deprivation**

Of the six access indicators currently available by New Zealand Deprivation Index (NZDep) quintile, three show improvement since the last report and three remain static. Performance against Indicator 4: Four-year-olds receive a B4 School Check (85 percent) lags behind national performance (89 percent) despite an explicit focus on higher-need populations by the B4 School Check programme and funding model. Further work to increase the proportion of children living in areas of high deprivation receiving B4 School Checks will be required to meet the December 2014 target of 90 percent.

Performance against Indicator 6: Immunisations are up to date by eight months has improved since the last report, with the rate for children living in areas of high deprivation nearing the total population rate, at 90 percent and 91 percent respectively. This represents an excellent population health gain for children who may experience poorer health or higher health needs due to material deprivation.

## **By ethnicity**

Results for Indicator 4: Four-year-olds receive a B4 School Check (at 81 percent and 74 percent, for Māori and Pacific respectively), show gains since the last report but are still significantly lower than the rate for all other ethnicities (89 percent). This is partly due to lower overall B4 School Check coverage for a number of regions with large Māori and Pacific populations, but providers should consider strategies to ensure equitable access to the B4 School Check.

Rates for Indicator 5: Children are enrolled with child oral health services are now available by ethnicity and show that while there has been improvement in overall enrolment rates (from 63 percent to 70 percent), enrolment for Māori and Pacific peoples is significantly lower at 55 percent and 66 percent, respectively. The role of WCTO in supporting families to engage with oral health services should be a key focus to improve oral health outcomes for Māori and Pacific families.

For Māori, a number of indicators still show lower access and uptake compared to the total population, including lower rates for Indicator 7: Children participate in early childhood education (93 percent versus 96 percent) and Indicator 3: Core WCTO contacts 1–5 received (65 percent versus 74 percent). Less than two-thirds of Māori infants were enrolled with primary care by three months of age, and this falls as low as 47 percent in some regions. Early enrolment with primary care is an important driver of timely immunisation and referral to other services such as community oral health and WCTO. Timely access to primary care can also reduce demand on emergency departments and secondary care. WCTO (including maternity services) has an important role in this area, and improving engagement with primary care will have a positive impact on a number of other indicators across the Framework.

Rates for Indicator 6: Immunisations are up to date by eight months, for Pacific children continues to be higher than any other population group, and at 93 percent nationally is tracking well to meet the 95 percent Better Public Service target. Six regions reached 100 percent immunisation coverage for Pacific children at eight months, which is a significant achievement. However, Pacific children have lower rates than other population groups for Indicators 4 and 7. Regions with large Pacific populations should focus on reviewing access rates and prioritise improvements that support access for Pacific families.

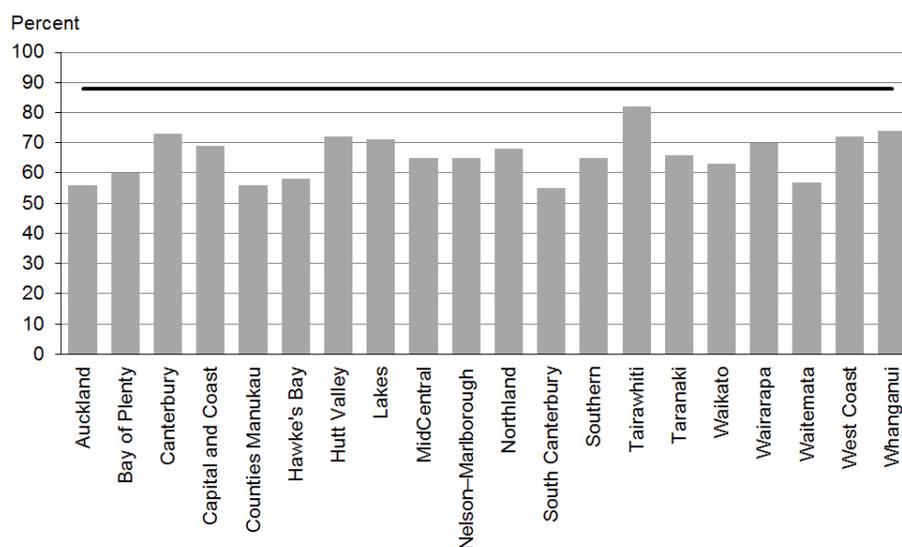
# WCTO Quality Improvement Framework

## Indicator 1

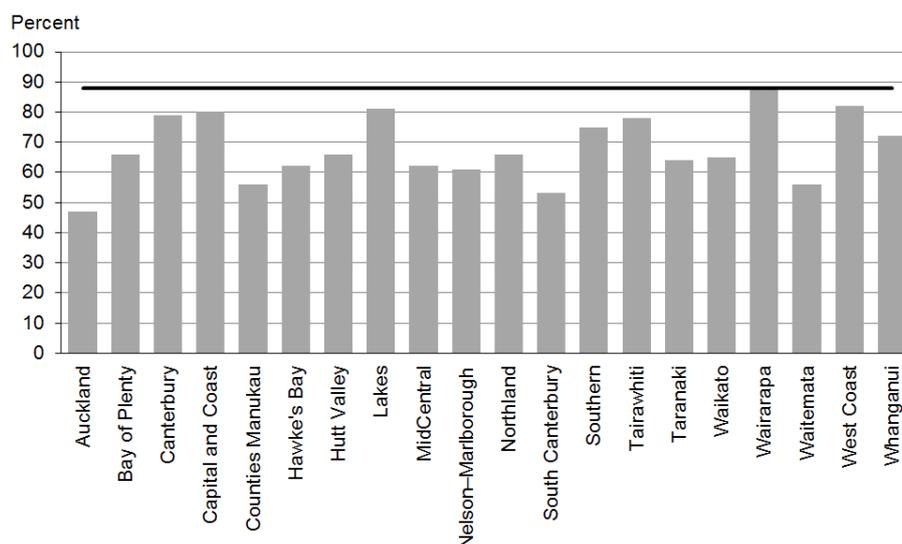
<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Newborns are enrolled with a primary health organisation (PHO) by three months of age <sup>2</sup>
<b>Target by December 2014:</b>	88 percent
<b>Target by June 2016:</b>	98 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	63% (55–82)	N/A	65% (47–88)	62% (35–125)

**Figure 1: Newborns enrolled with a PHO by three months, total New Zealand**

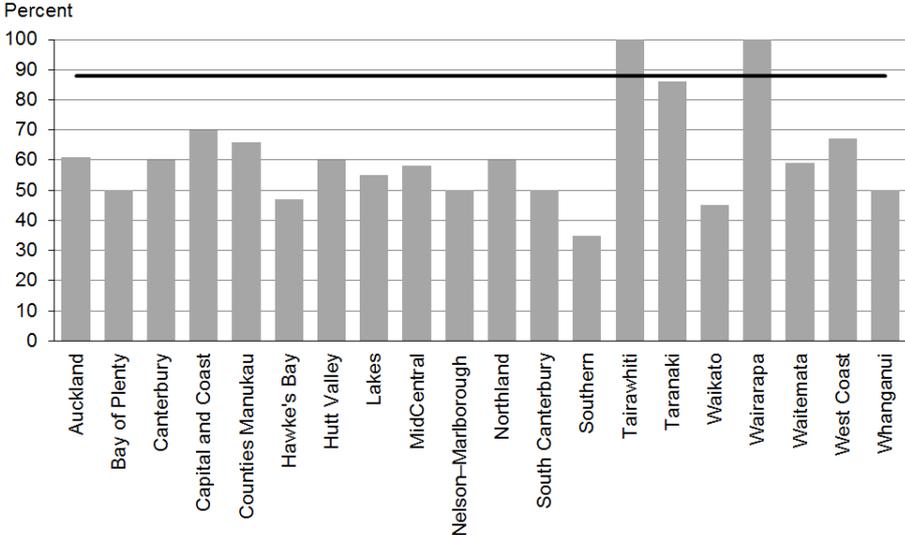


**Figure 2: Newborns enrolled with a PHO by three months, Māori**



<sup>2</sup> Indicator 1 was designed to measure enrolment with a general practice by two weeks of age. This data was not available at the time of writing, and so enrolment with a PHO by three months of age has been used as an interim measure.

**Figure 3: Newborns enrolled with a PHO by three months, Pacific**



**Data notes**

- Data on enrolment with a general practice by two weeks of age was not available at the time of writing. Enrolment with a PHO by three months of age has been used as an interim measure.
- Data is not currently available by deprivation quintile.
- Time period: births between 20 August 2013 and 19 November 2013.
- Excludes overseas DHB and undefined DHB.
- Numerator: enrolments of infants under three months with a PHO.
- Denominator: births reported to the National Immunisation Register (NIR).

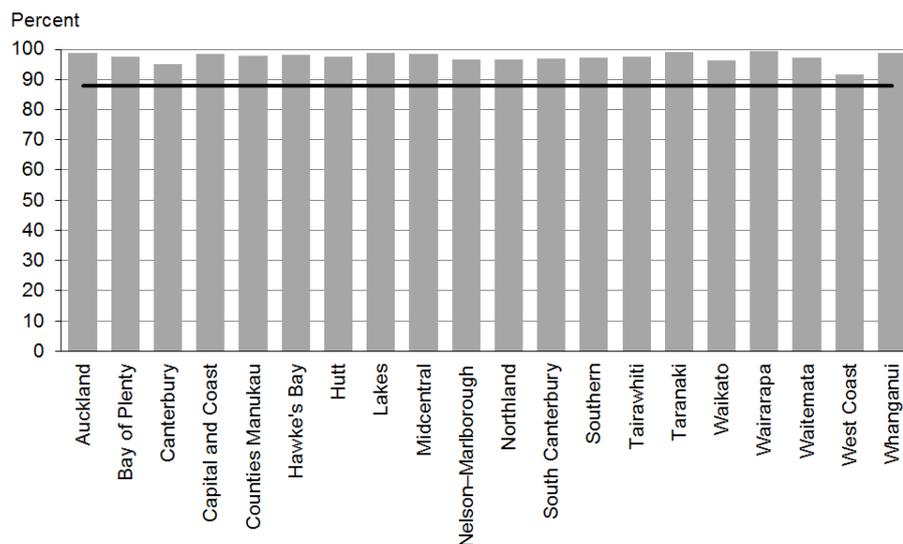
# WCTO Quality Improvement Framework

## Indicator 2

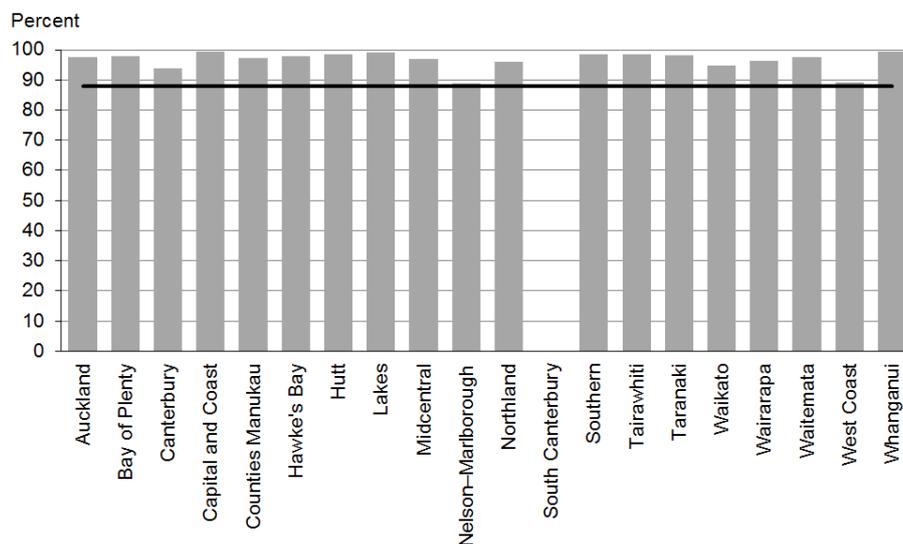
<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Families are referred from their lead maternity carer (LMC) to a WCTO provider
<b>Target by December 2014:</b>	88 percent
<b>Target by June 2016:</b>	98 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	97% (92–99)	97% (89–99)	97% (89–99)	97% (86–100)

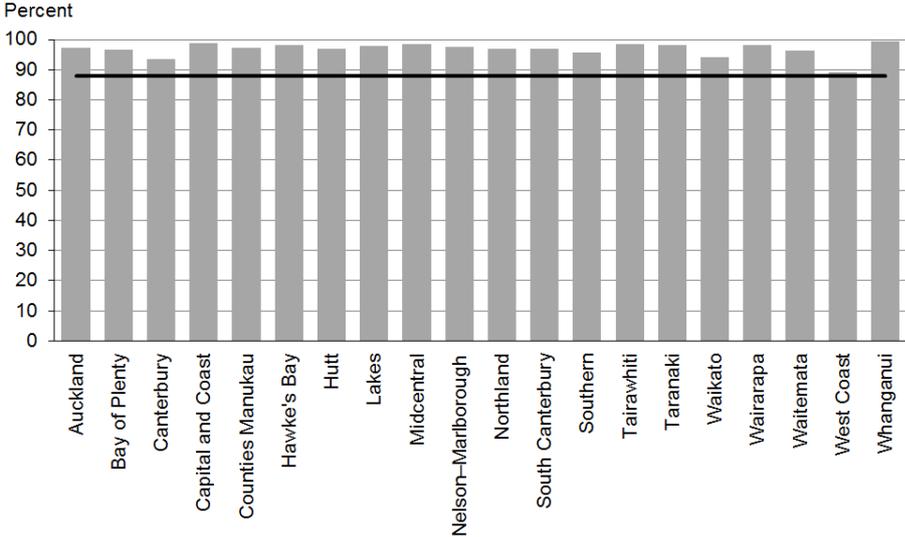
**Figure 4: Referral from LMC to WCTO, total New Zealand**



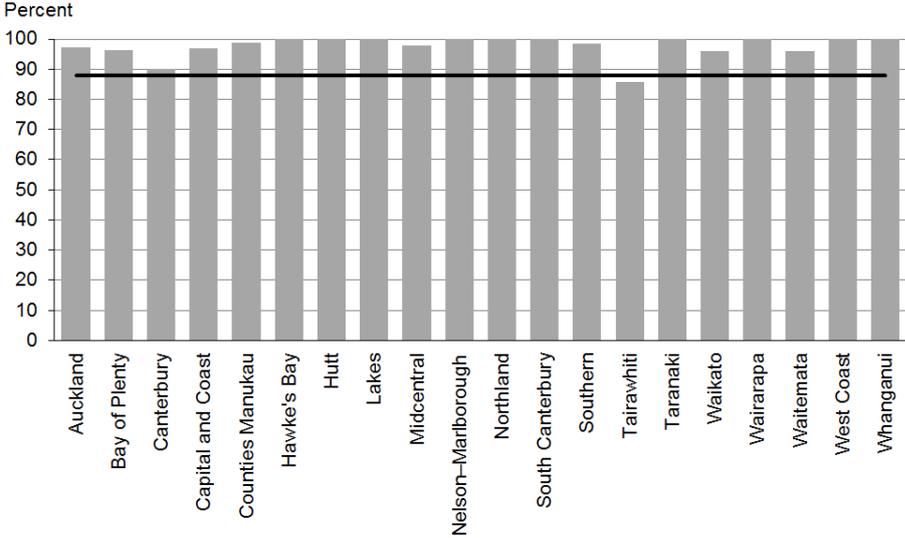
**Figure 5: Referral from LMC to WCTO, high deprivation**



**Figure 6: Referral from LMC to WCTO, Māori**



**Figure 7: Referral from LMC to WCTO, Pacific peoples**



**Data notes**

- No bar on graph = no infants in this category.
- Time period: births between January 2013 and June 2013.
- The data excludes overseas DHB and undefined DHB.
- Numerator: LMC referral to WCTO = Y (source: National Maternity Collection [MAT]).
- Denominator: LMC referral to WCTO = Y or N (source: MAT).

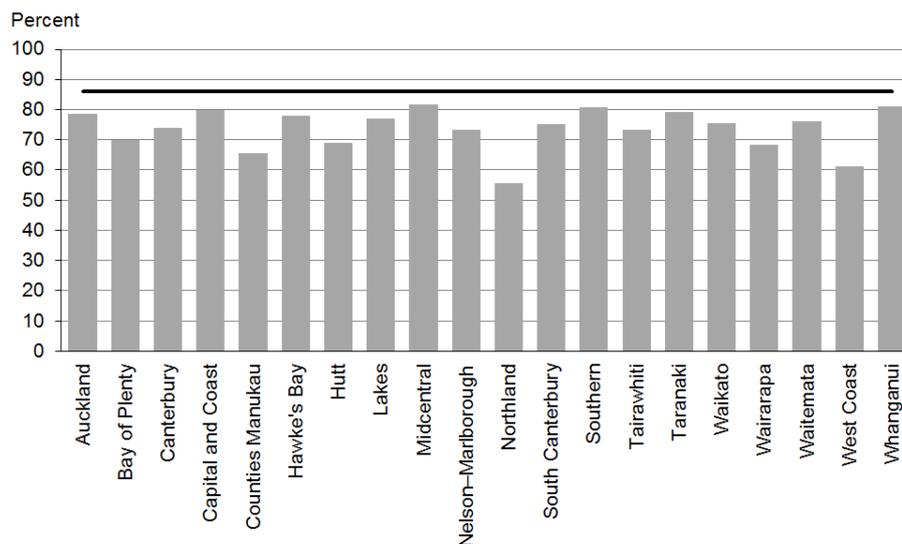
# WCTO Quality Improvement Framework

## Indicator 3

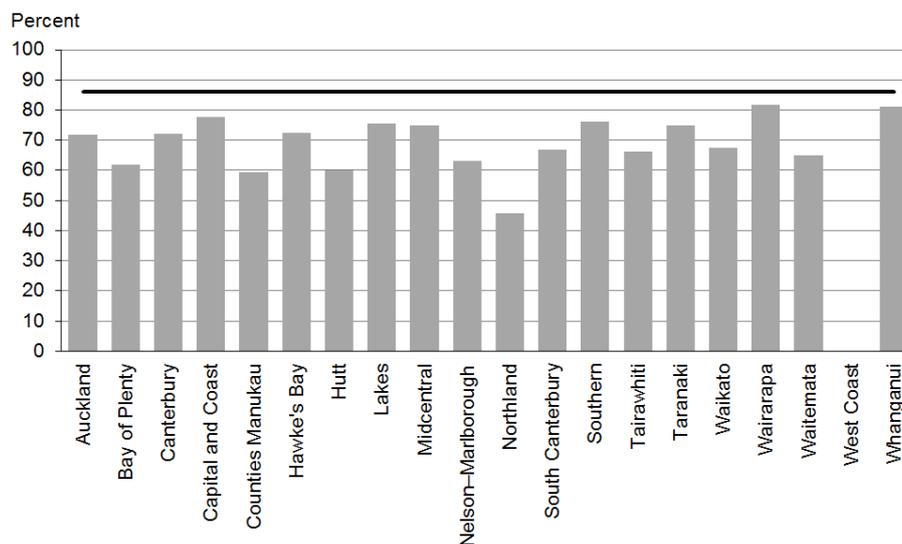
<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Infants receive all WCTO core contacts in their first year
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	74% (56–82)	66% (46–82)	65% (46–78)	65% (56–82)

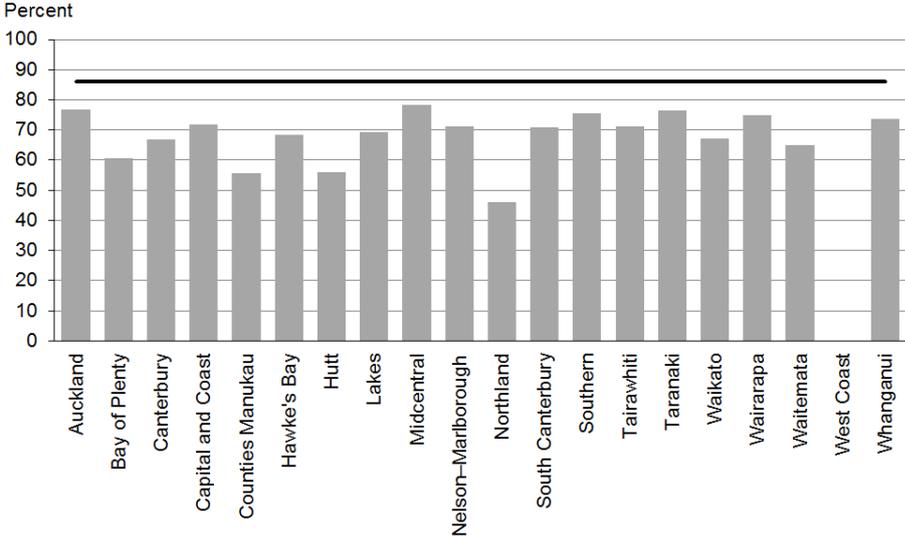
**Figure 8: Core WCTO contacts 1–5 received, total New Zealand**



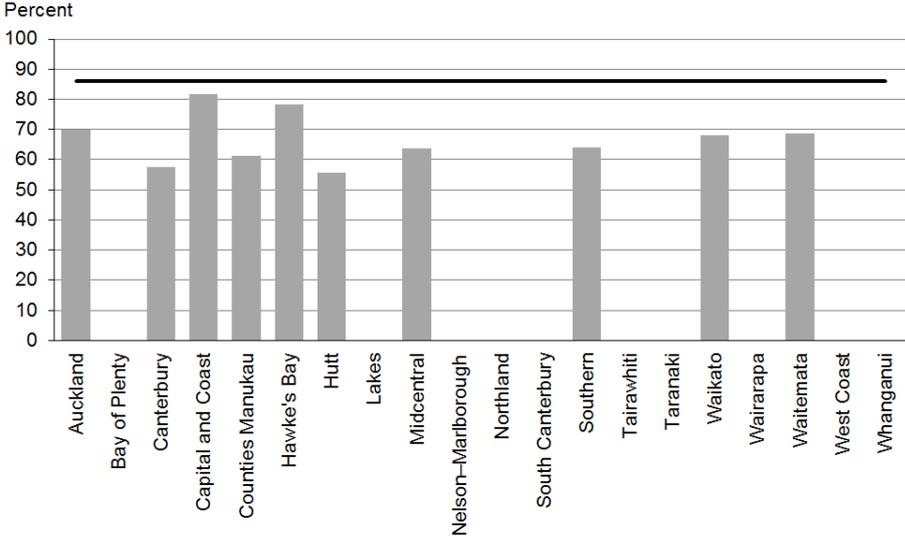
**Figure 9: Core WCTO contacts 1–5 received, high deprivation**



**Figure 10: Core WCTO contacts 1–5 received, Māori**



**Figure 11: Core WCTO contacts 1–5 received, Pacific peoples**



**Data notes**

- No bar on graph = fewer than 20 children in that population.
- Time period: children reaching core contact six age band between January 2013 and June 2013.
- Excludes overseas DHB and undefined DHB.
- Numerator: number of infants where contact was able to be made by six weeks and who received all five contacts (source: Plunket).
- Denominator: number of infants where contact was able to be made by six weeks, who reached core contact six age band (13 months, 4 weeks, 1 day) (source: Plunket).

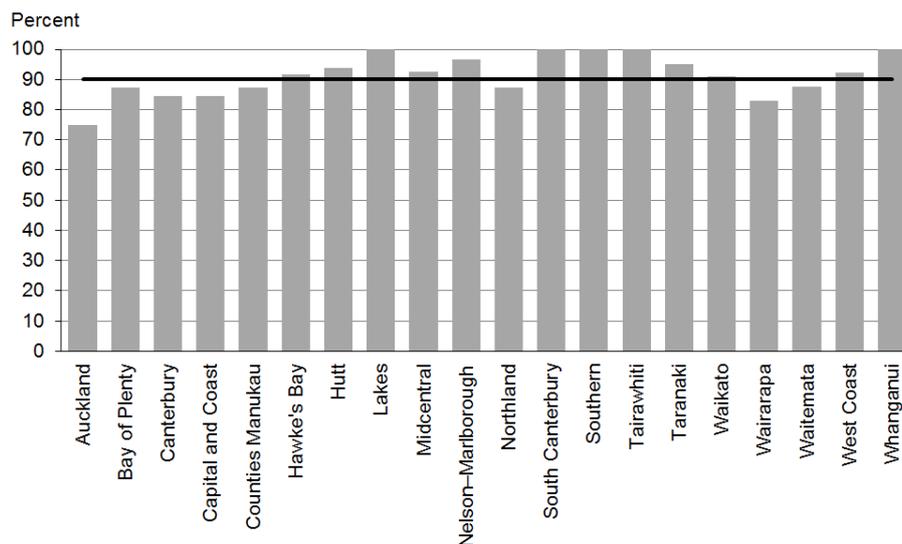
# WCTO Quality Improvement Framework

## Indicator 4

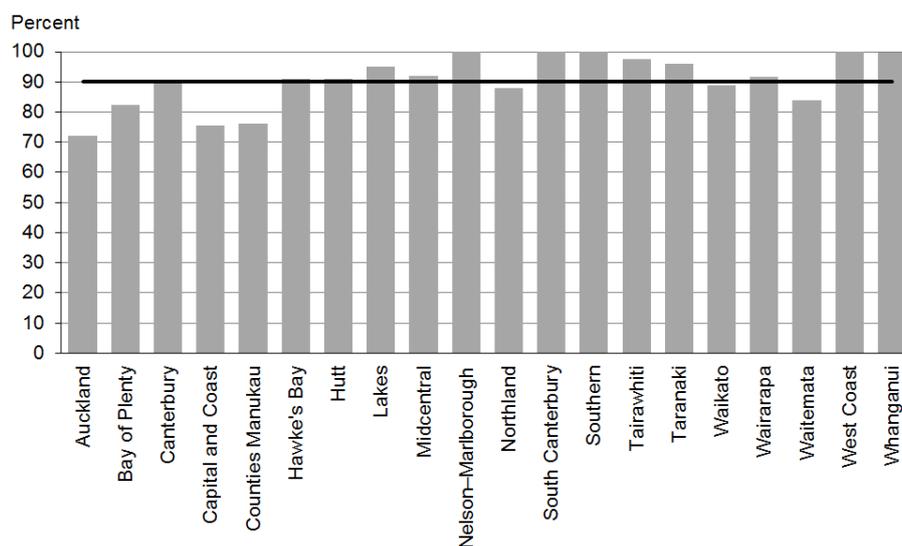
<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Four-year-olds receive a B4 School Check
<b>Target by December 2014:</b>	90 percent
<b>Target by June 2016:</b>	90 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	89% (75–109)	85% (72–117)	81% (63–112)	74% (38–179)

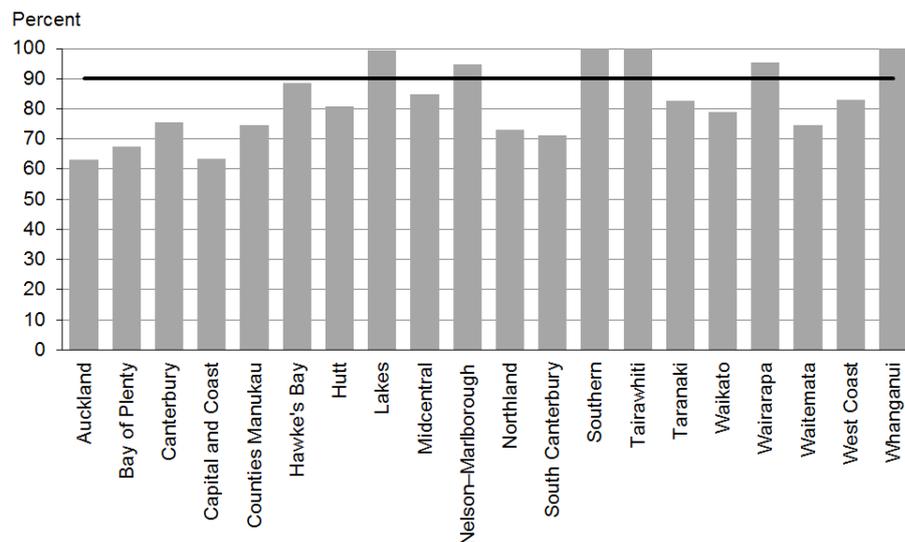
**Figure 12: Children receive a B4 School Check, total New Zealand**



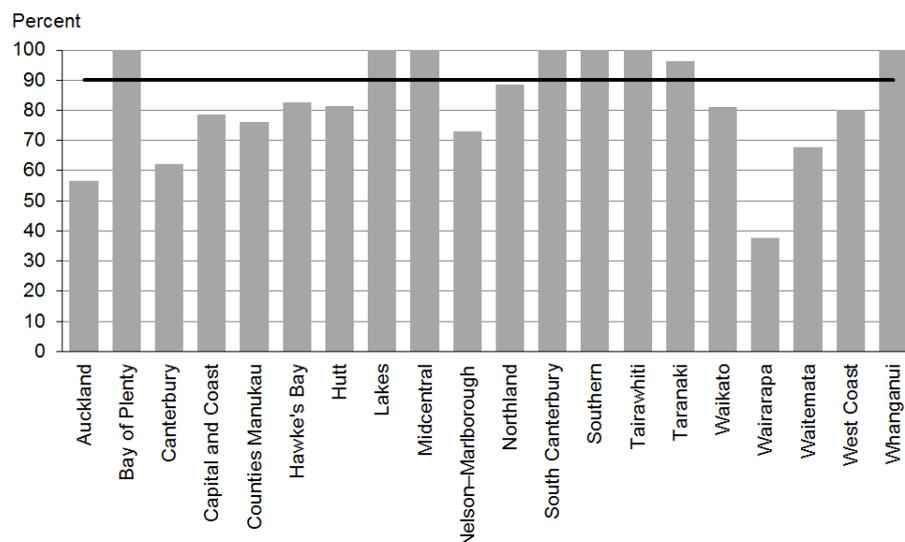
**Figure 13: Children receive a B4 School Check, high deprivation**



**Figure 14: Children receive a B4 School Check, Māori**



**Figure 15: Children receive a B4 School Check, Pacific peoples**



**Data notes**

- Time period: checks between 8 July 2013 and 7 January 2014.
- DHB is DHB of service.
- Numerator: number of completed B4 School Checks (source: B4 School Checks).
- Denominator: number of children eligible for a B4 School Check (source: PHO).

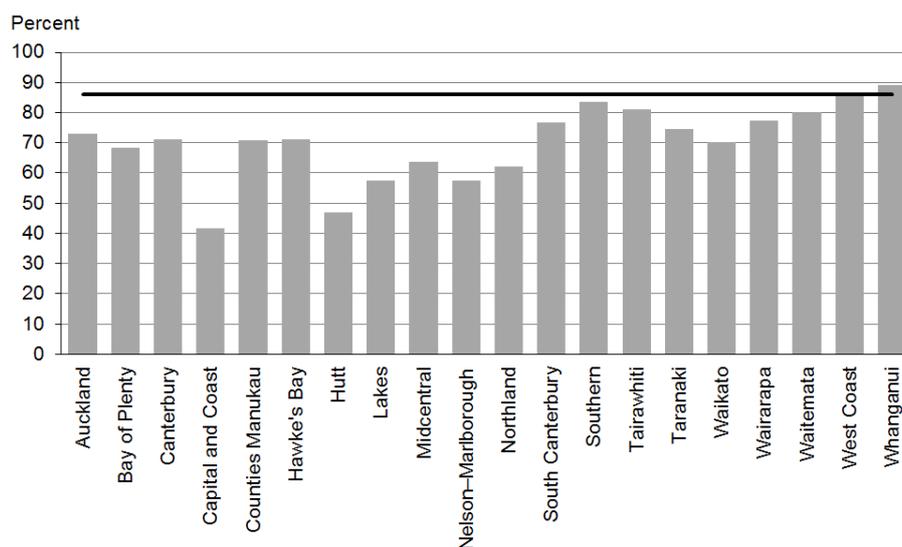
# WCTO Quality Improvement Framework

## Indicator 5

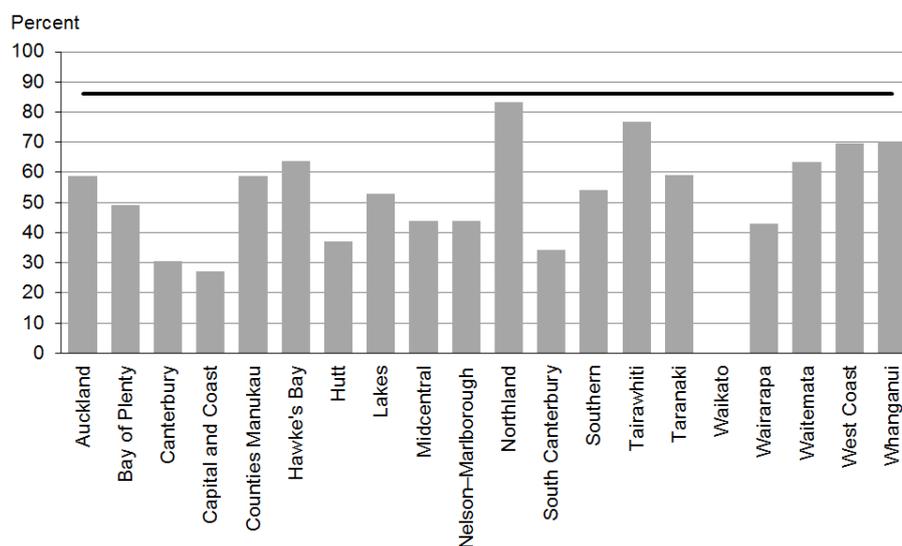
<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Children are enrolled with child oral health services
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	70% (42–89)	N/A	55% (27–83)	66% (33–100)

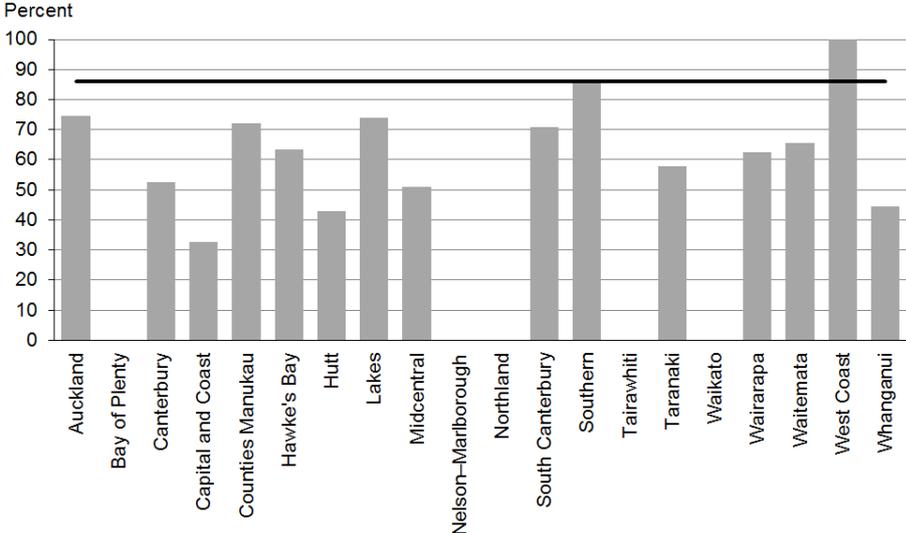
**Figure 16: Preschool children enrolled with oral health services, total New Zealand**



**Figure 17: Preschool children enrolled with oral health services, Māori**



**Figure 18: Preschool children enrolled with oral health services, Pacific peoples**



**Data notes**

- No bar on graph = no infants in this category.
- Data is not currently available by deprivation quintile.
- Time period: number of preschool children enrolled in 2012 year
- Numerator: number of children under five enrolled with oral health services (source: community oral health services).
- Denominator: number of children aged under five (source: PHO).

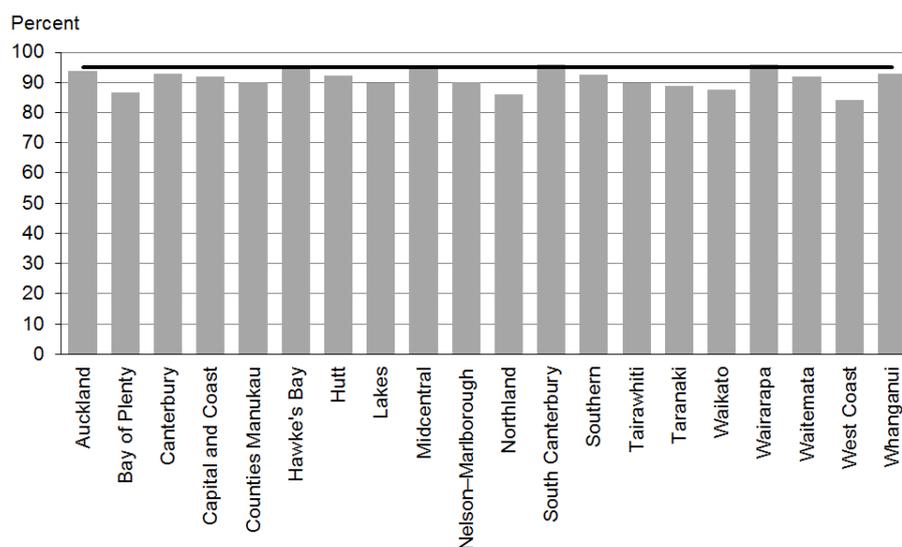
# WCTO Quality Improvement Framework

## Indicator 6

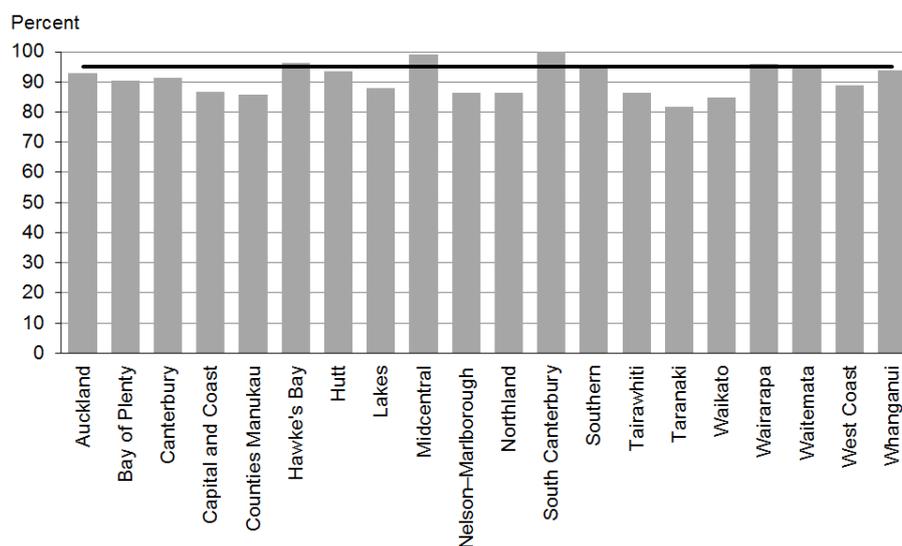
<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Immunisations are up to date by eight months
<b>Target by December 2014:</b>	95 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	91% (84–96)	90% (82–100)	88% (81–96)	93% (60–100)

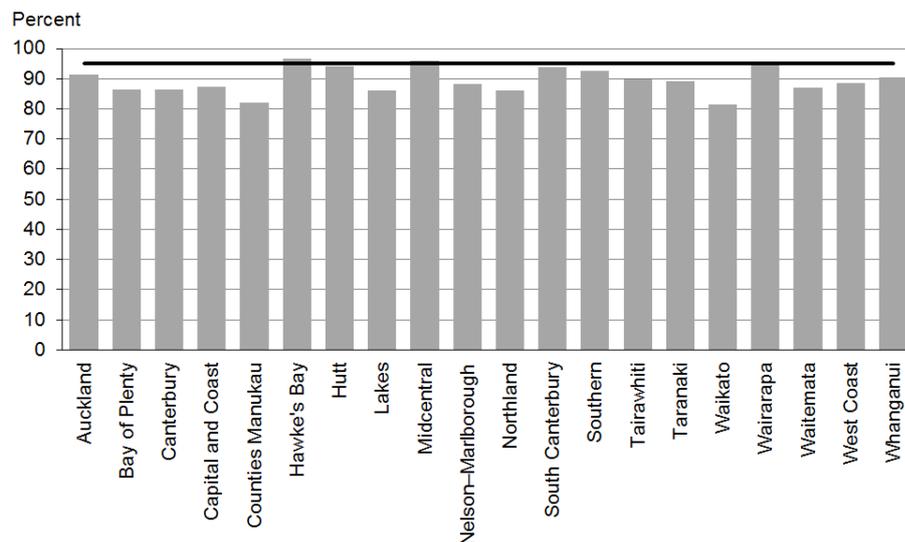
**Figure 19: Fully immunised by eight months, total New Zealand**



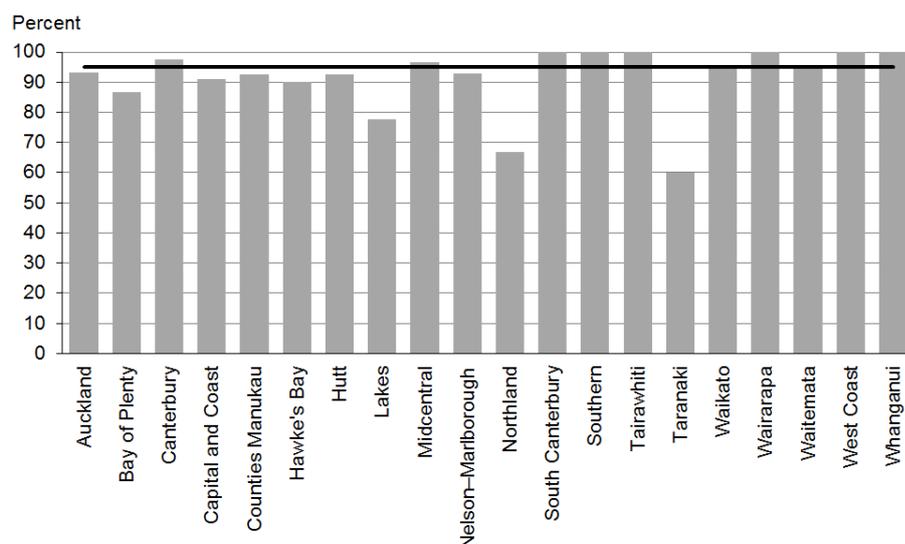
**Figure 20: Fully immunised by eight months, high deprivation**



**Figure 21: Fully immunised by eight months, Māori**



**Figure 22: Fully immunised by eight months, Pacific peoples**



**Data notes**

- Time period: October 2013 to December 2013.
- Excludes overseas DHB and undefined DHB.
- Numerator: number of eight-month-old infants up to date for age (source: NIR).
- Denominator: number of eight-month-old infants (source: NIR).

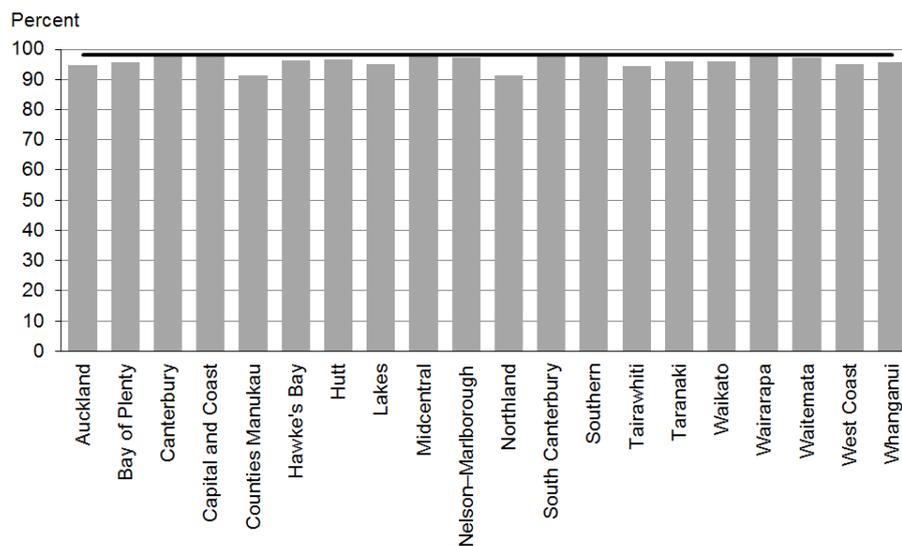
# WCTO Quality Improvement Framework

## Indicator 7

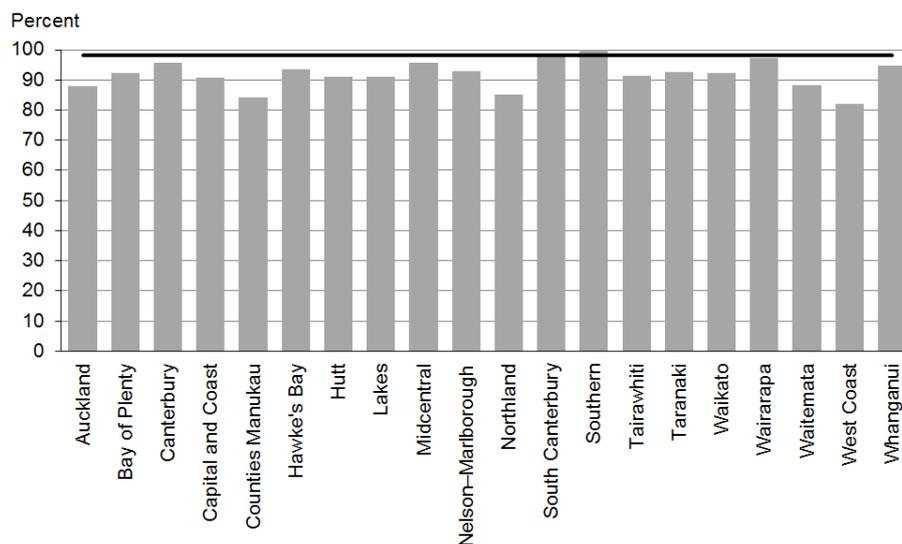
<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Children participate in early childhood education (ECE)
<b>Target by December 2014:</b>	98 percent
<b>Target by June 2016:</b>	98 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	96% (90–98)	89% (84–100)	93% (87–98)	89% (84–100)

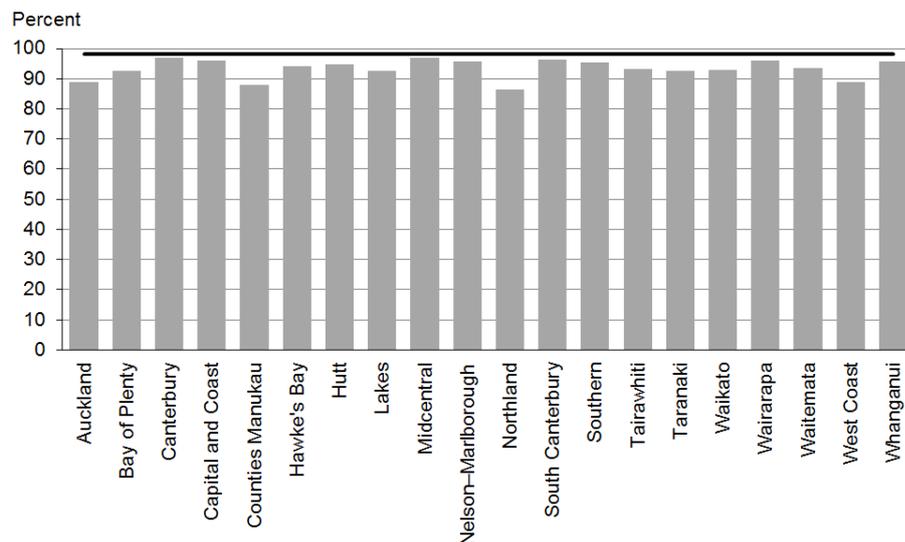
**Figure 23: Prior participation in ECE, total New Zealand**



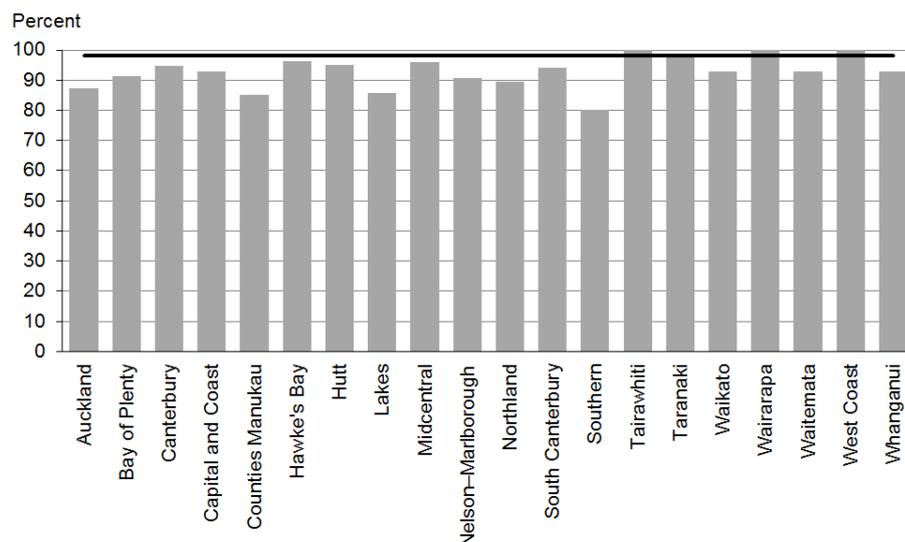
**Figure 24: Prior participation in ECE, high deprivation**



**Figure 25: Prior participation in ECE, Māori**



**Figure 26: Prior participation in ECE, Pacific peoples**



**Data notes**

- No bar on graph = no children in this category.
- Time period: children starting school during the 12 months to December 2013.
- High deprivation: children attending a Ministry of Education decile 1 or 2 school.
- Numerator: number of children starting school who have participated in ECE (source: ENROL).
- Denominator: number of children starting school (source: ENROL).

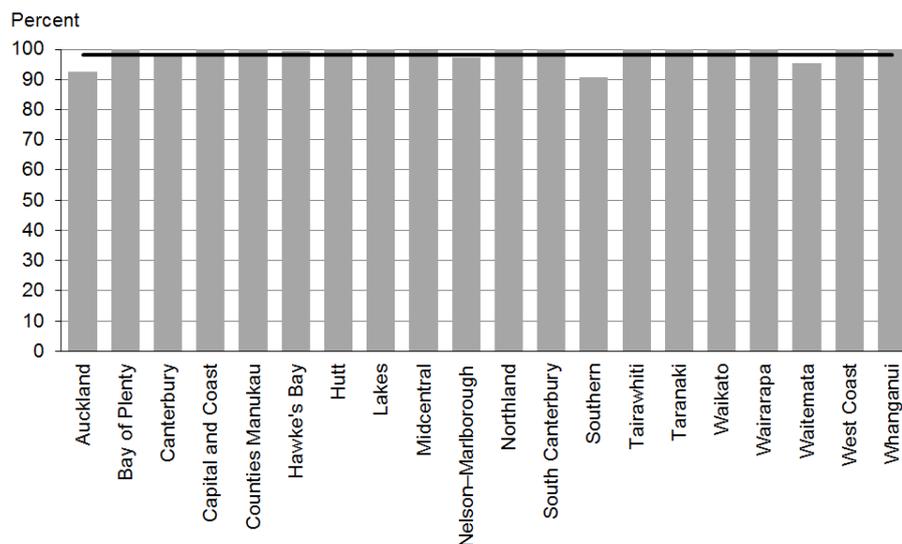
# WCTO Quality Improvement Framework

## Indicator 8

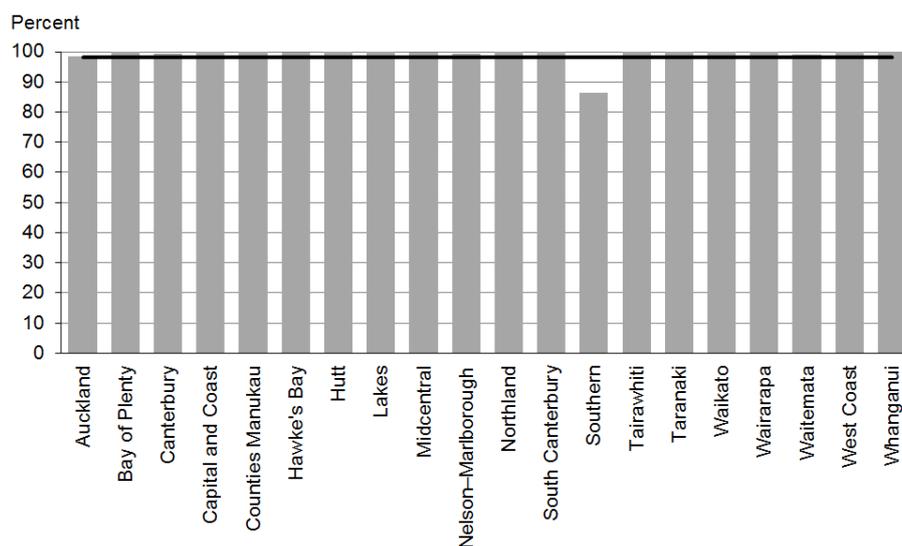
<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Children under six have access to free primary care
<b>Target by December 2014:</b>	98 percent
<b>Target by June 2016:</b>	100 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	98% (91–100)	99% (86–100)	99% (89–100)	100% (90–100)

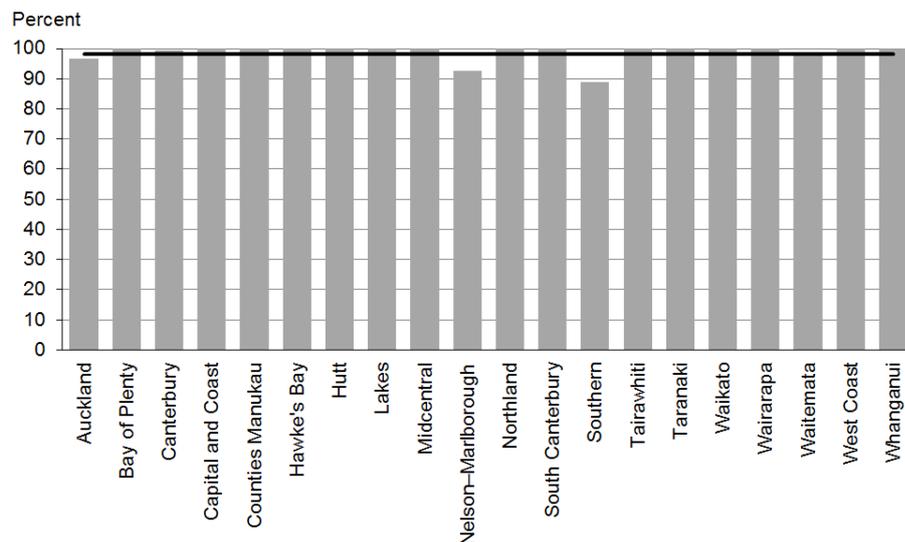
**Figure 27: Under-six access to free primary care, total New Zealand**



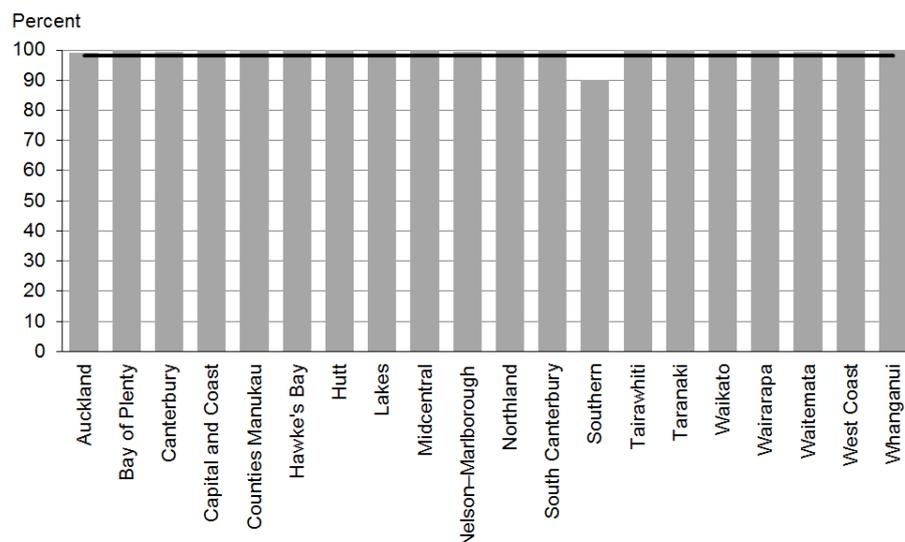
**Figure 28: Under-six access to free primary care, high deprivation**



**Figure 29: Under-six access to free primary care, Māori**



**Figure 30: Under-six access to free primary care, Pacific peoples**



**Data notes**

- Time period: snapshot as at 1 January 2014.
- Numerator: number of children under six enrolled with a PHO delivering free primary care for under-sixes (source: PHO).
- Denominator: number of children under six enrolled with a PHO (source: PHO).

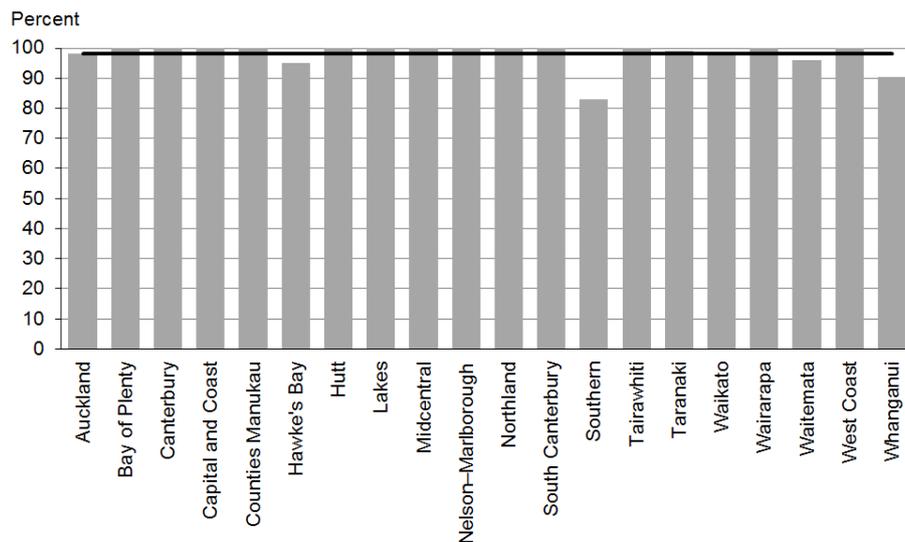
# WCTO Quality Improvement Framework

## Indicator 9

<b>Standard:</b>	All children and families have access to primary care, WCTO services (including the B4 School Check) and early childhood education
<b>Indicator:</b>	Children under six have access to free after-hours primary care
<b>Target by December 2014:</b>	98 percent
<b>Target by June 2016:</b>	100 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	98% (83–100)	N/A	N/A	N/A

**Figure 31: Under-six access to free after-hours primary care, total New Zealand**



### Data notes

- Time period: snapshot as at 1 January 2014
- Data is not available by ethnicity or deprivation quintile.
- Numerator: number of children under six enrolled with a PHO delivering free after-hours primary care for under sixes (source: PHO).
- Denominator: number of children under six enrolled with a PHO (source: PHO).

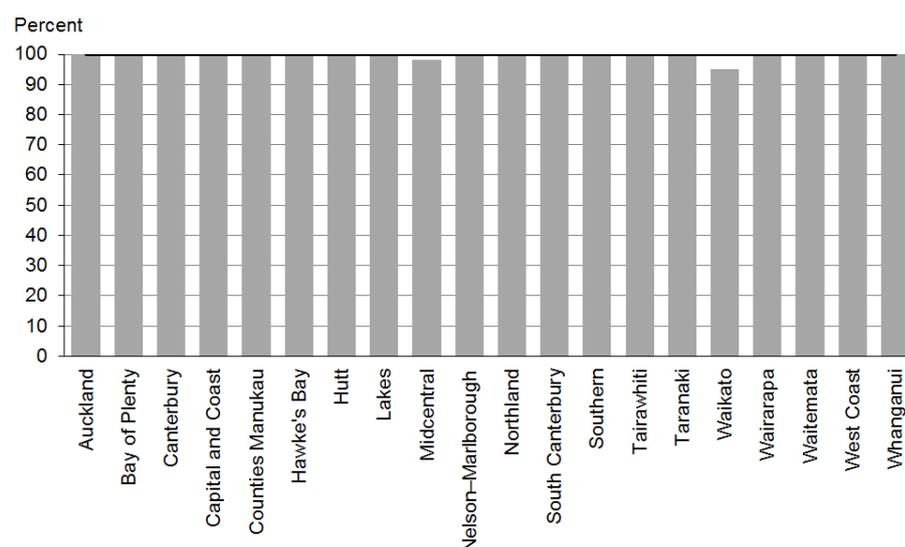
# WCTO Quality Improvement Framework

## Indicator 10

<b>Standard:</b>	All children and families have access to specialist and other referred services, where required, in a timely manner
<b>Indicator:</b>	Children are seen promptly following referral to specialist services
<b>Target by December 2014:</b>	100 percent within five months of referral
<b>Target by June 2016:</b>	100 percent within four months of referral

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	99% (95–100)	N/A	N/A	N/A

**Figure 32: Paediatric medicine first specialist appointment received within five months**



### Data notes

- Time period: snapshot for December 2013 (data extracted February 2014).
- DHB is DHB of service.
- Data is not available by ethnicity or deprivation quintile.
- The data presented is for any referral to DHB paediatric medicine (any age).
- Numerator: number waiting longer than five months (source: DHB ESPI reporting).
- Denominator: total number waiting at end of month (source: DHB ESPI reporting).

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# Indicators 11–20: Outcomes

Aim 2 of the WCTO Quality Improvement Framework is **improved health and equity for all populations**. This can be measured by improved child and family/whānau health and wellbeing outcomes. It is expected that in addition to these indicators, DHBs and WCTO providers will consider other measures of family/whānau health and wellbeing that can be monitored through national or local data sources.

Indicators 11–20 measure health outcomes across a range of domains. This set is not exhaustive, but instead aims to measure a range of infant and child physical health (nutrition and healthy weight, oral health), mental health (strengths and difficulties questionnaire) and family health (smoking status) outcomes. It is expected that additional health and wellbeing outcome measures will be added as new data becomes available.

These indicators reflect the core roles of WCTO in promoting and supporting physical health, mental wellbeing, healthy families and healthy home environments. Achieving improvements in these indicators will require a cross-sector response and a multi-faceted approach, and improvements may not be seen in the short term. However, monitoring health and wellbeing outcomes is important because it shows where WCTO services are working well and where WCTO is working together with the wider health sector to achieve the best outcomes for families and whānau.

## Summary of results for this period

### National

Data for this period shows good overall outcomes for a number of indicators in relation to the 2014 and 2016 targets, with eight indicators continuing to meet or exceed 2014 targets nationally. However, only two indicators show improvement since the last report, with five indicators remaining static and a further three (Indicator 15: Children are a healthy weight at four years of age, Indicator 16: Children are caries free at five years and Indicator 19: Mothers are smokefree at two weeks postnatal) decreasing slightly. At a whole-of-population level the focus should be on targeting indicators, such as Indicator 17: Burden of dental decay is minimised, which have room for improvement, while striving to maintain current good outcomes.

### By region

Data for this period shows variable performance by region. Two DHBs (Waitemata and Southern) achieved the 2014 targets for every outcomes indicator, while other DHBs met as few as four of ten targets. Only four DHBs met the 2014 target for Indicator 16: Children are caries free at five years, and performance varied from 39 to 72 percent. DHBs and WCTO providers, including primary maternity providers, should review the characteristics of higher-performing regions and identify success factors that could be applied locally.

## **By deprivation**

Oral health data (Indicators 16 and 17) is not available by deprivation quintile at this time. Other indicators show generally poorer rates for children living in areas of high deprivation, with lower national rates and fewer DHBs meeting 2014 or 2016 targets. Since the last report, fewer women living in areas of high deprivation are smokefree at two weeks postnatal (75 percent, compared with 76 percent in the last report and 86 percent nationally). The five infant and child nutrition and healthy weight indicators also show poorer outcomes among infants and children living in areas of high deprivation relative to the total population.

Fewer infants are exclusively or fully breastfed at three months (43 percent versus 55 percent nationally), fewer infants receive some breast milk at six months (55 percent versus 65 percent nationally) and fewer children are a healthy weight at four years (68 percent versus 76 percent nationally). Only one of these five indicators shows improved outcomes among families living in areas of high deprivation since the last report (Indicator 11: Infants exclusively or fully breastfed at two weeks), with the other four indicators decreasing or remaining static.

## **By ethnicity**

Outcomes for Māori and Pacific families are significantly poorer across a range of indicators. For Māori, maternal tobacco use is significantly higher than for the total population, with only 64 percent of women smokefree at two weeks postnatal relative to 86 percent of the total population, which is a drop of one percentage point since the last report. Nationally, Māori infants still have the lowest rates of exclusive or full breastfeeding at six weeks (71 percent) and any breastfeeding at six months (52 percent versus 65 percent nationally).

Indicator 16: Children are caries free at five years shows significant rates of decay for Māori children (39 percent of children are caries free at age five), a drop of two percentage points since the last report. There are also significant disparities in oral health for Pacific infants and children, with only 37 percent of children caries free at five years, although this has improved by two percentage points since the last report. The WCTO programme has an important role in the assessment and support of oral health at core and additional contacts, and through referral to oral health services, to minimise the inequitable burden of poor oral health among Māori and Pacific children.

Fewer Pacific children are a healthy weight at four years of age (58 percent, versus 70 percent for Māori, 68 percent for children living in areas of high deprivation and 75 percent nationally). There has been a drop of one to two percentage points across all population groups for Indicator 15 since the last report.

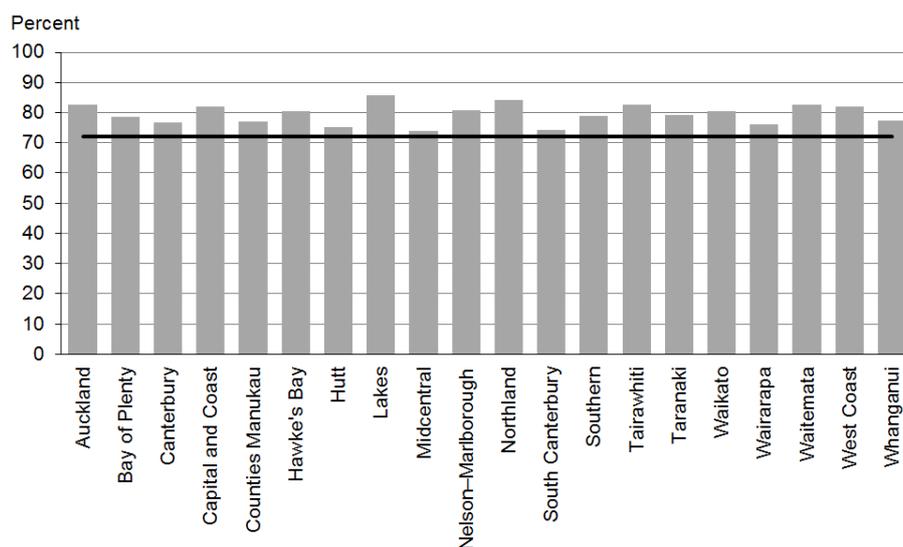
# WCTO Quality Improvement Framework

## Indicator 11

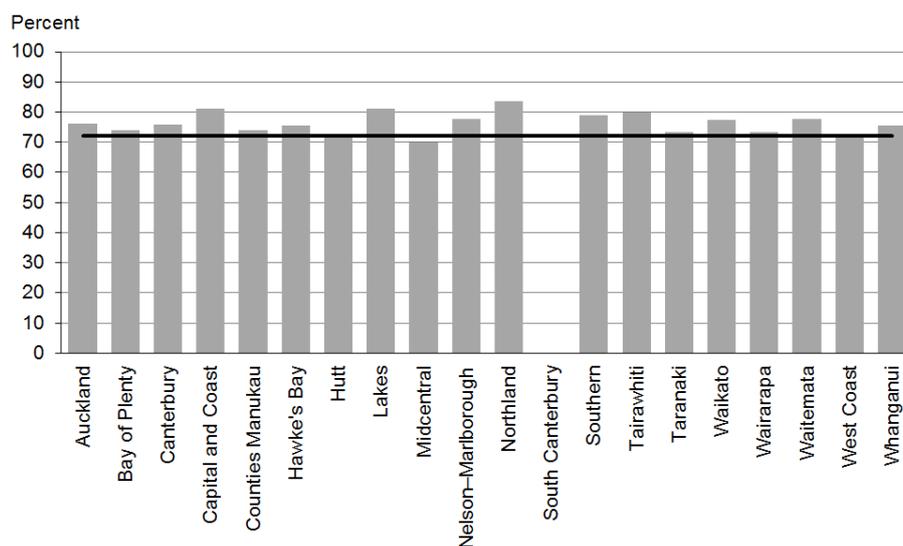
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Infants are exclusively or fully breastfed at two weeks
<b>Target by December 2014:</b>	72 percent
<b>Target by June 2016:</b>	80 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	80% (74–86)	77% (70–83)	78% (67–85)	76% (50–100)

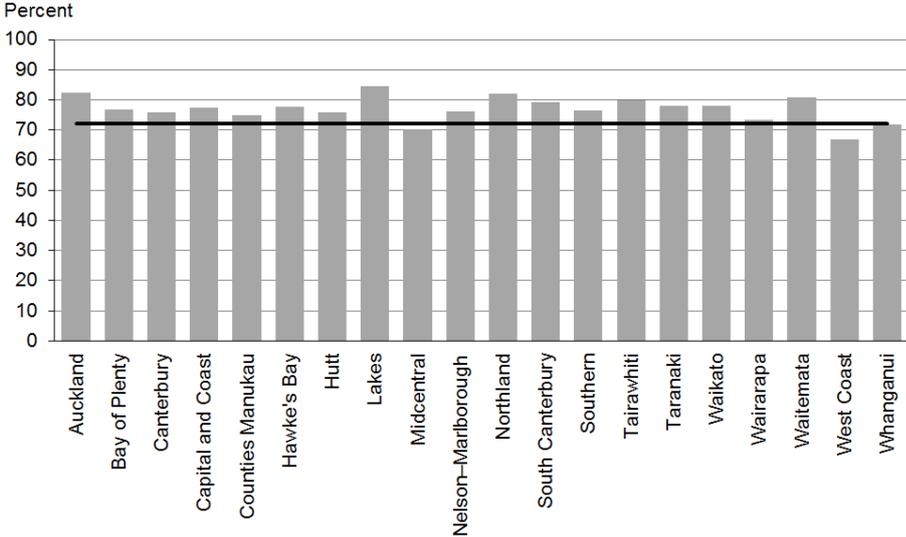
**Figure 33: Exclusively or fully breastfed at two weeks, total New Zealand**



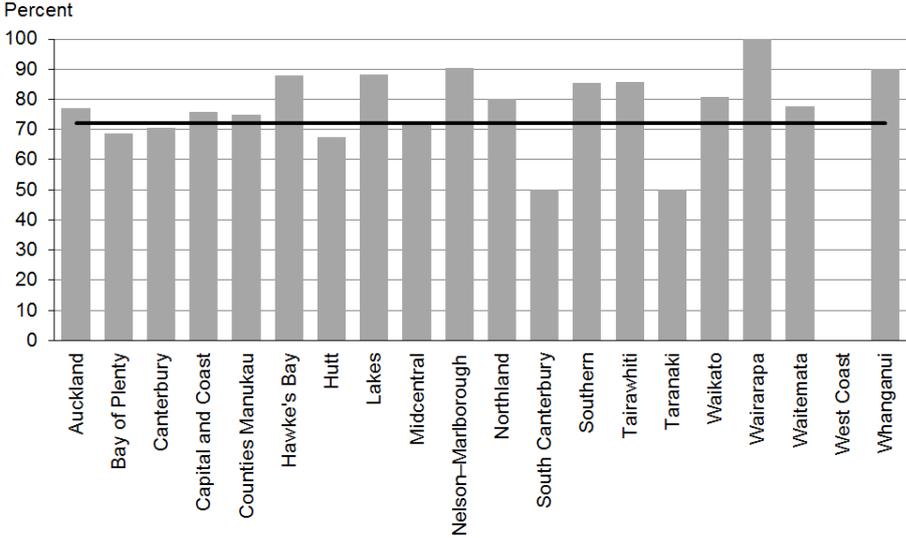
**Figure 34: Exclusively or fully breastfed at two weeks, high deprivation**



**Figure 35: Exclusively or fully breastfed at two weeks, Māori**



**Figure 36: Exclusively or fully breastfed at two weeks, Pacific peoples**



**Data notes**

- No bar on graph = no infants in this category.
- Time period: babies born between January 2013 and June 2013.
- Excludes overseas DHB and undefined DHB.
- Numerator: breastfeeding at two weeks = exclusive or fully (source: MAT).
- Denominator: breastfeeding at two weeks = not null (source: MAT).

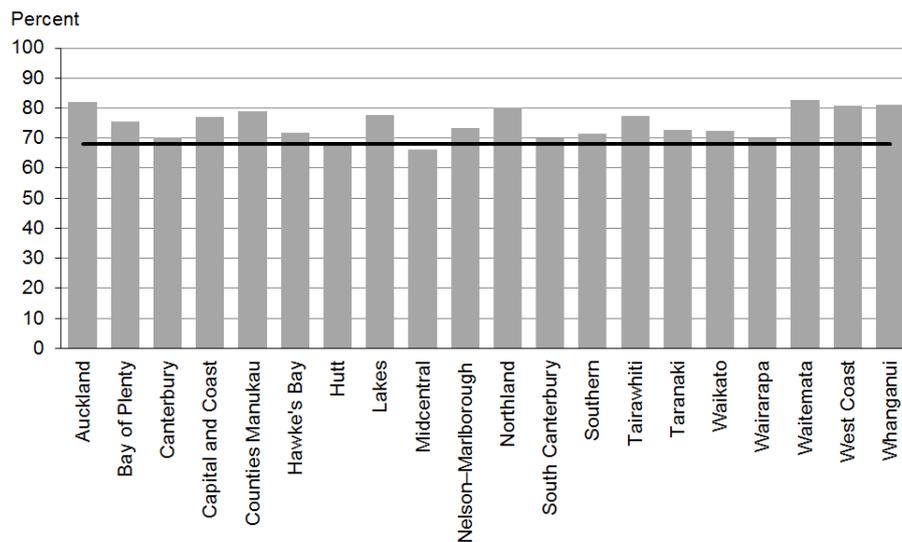
# WCTO Quality Improvement Framework

## Indicator 12

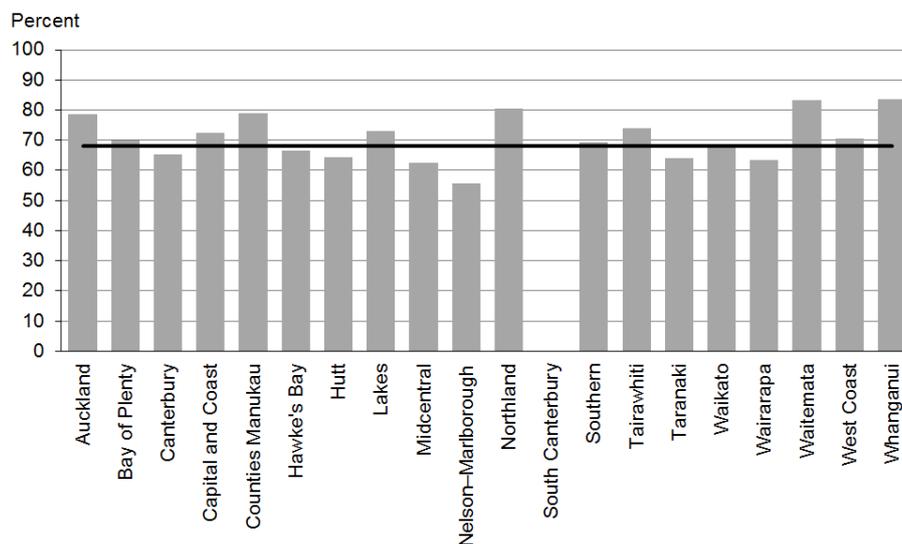
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Infants are exclusively or fully breastfed on discharge from lead maternity carer (LMC) care
<b>Target by December 2014:</b>	68 percent
<b>Target by June 2016:</b>	75 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	76% (66–83)	73% (56–83)	71% (50–81)	75% (0–100)

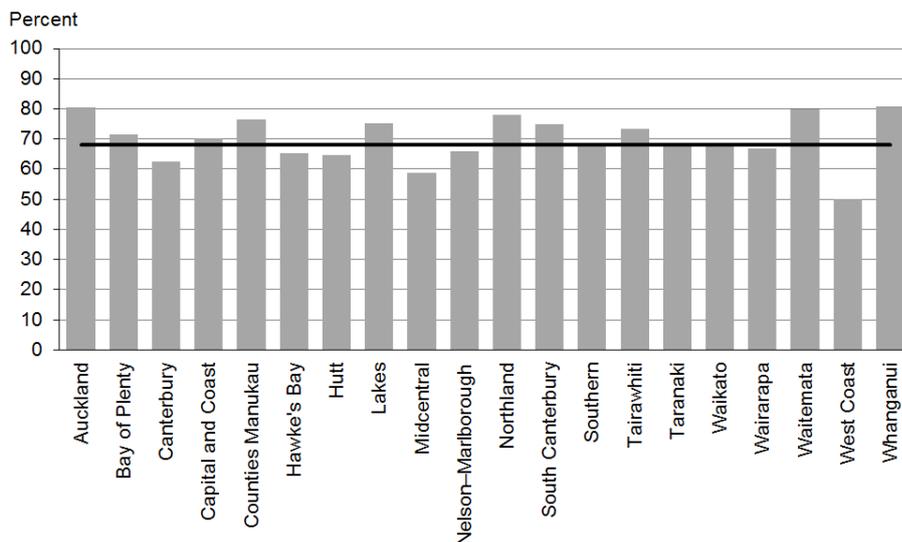
**Figure 37: Exclusively or fully breastfed at LMC discharge, total New Zealand**



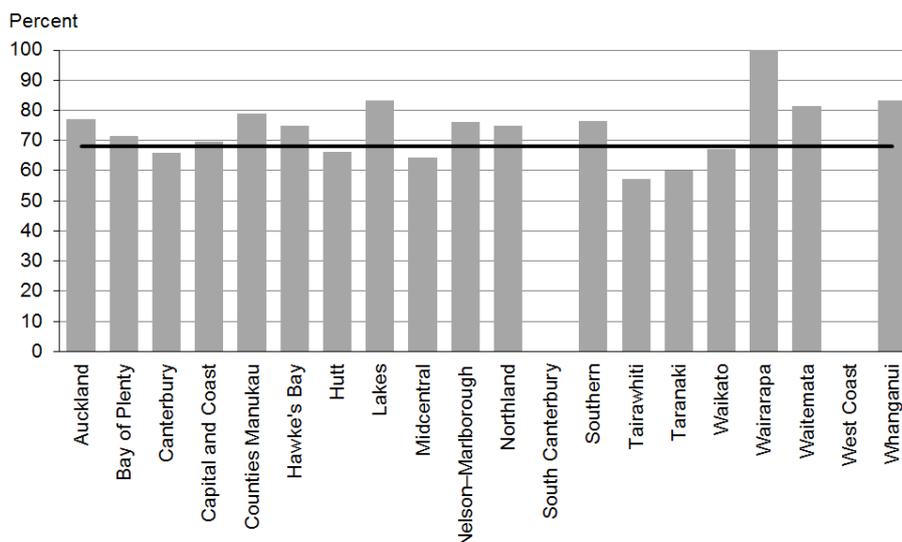
**Figure 38: Exclusively or fully breastfed at LMC discharge, high deprivation**



**Figure 39: Exclusively or fully breastfed at LMC discharge, Māori**



**Figure 40: Exclusively or fully breastfed at LMC discharge, Pacific peoples**



**Data notes**

- No bar on graph = no infants in this category.
- Time period: babies born between January 2013 and June 2013.
- Excludes overseas DHB and undefined DHB.
- Numerator: breastfeeding at discharge = exclusive or fully (source: MAT).
- Denominator: breastfeeding at discharge = not null (source: MAT).

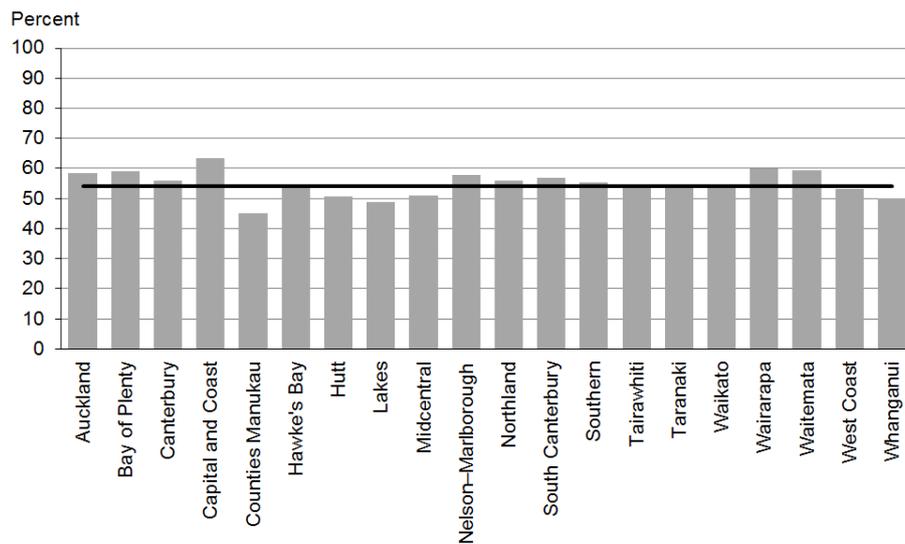
# WCTO Quality Improvement Framework

## Indicator 13

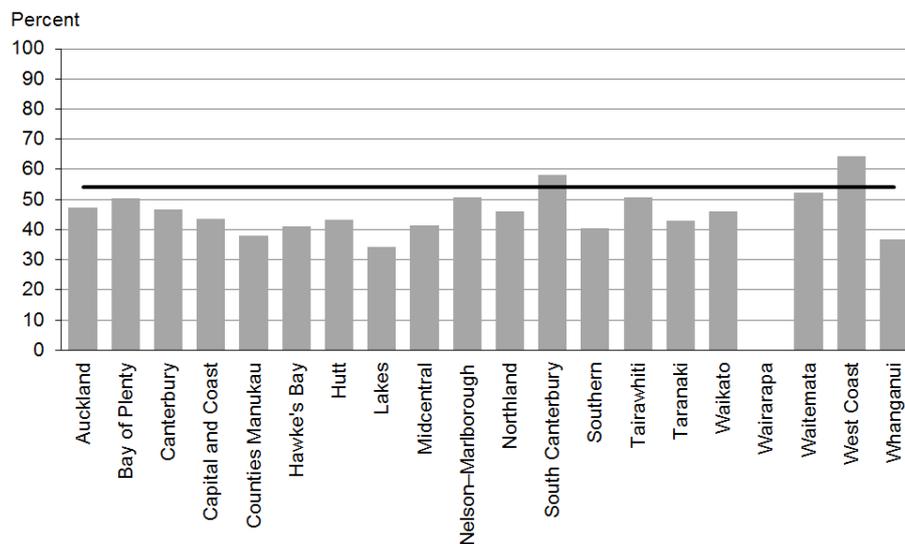
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Infants are exclusively or fully breastfed at three months of age
<b>Target by December 2014:</b>	54 percent
<b>Target by June 2016:</b>	60 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	55% (45–63)	43% (34–64)	44% (34–62)	45% (36–65)

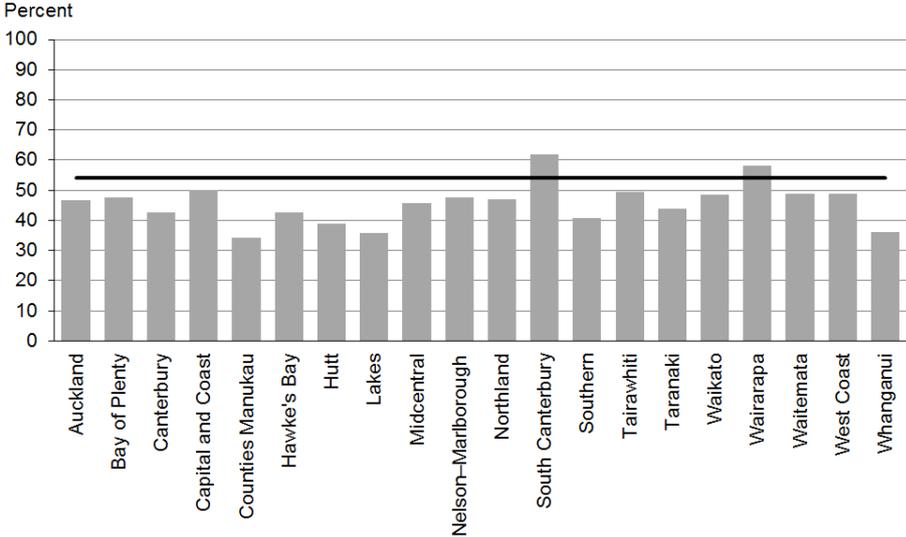
**Figure 41: Exclusively or fully breastfed at three months, total New Zealand**



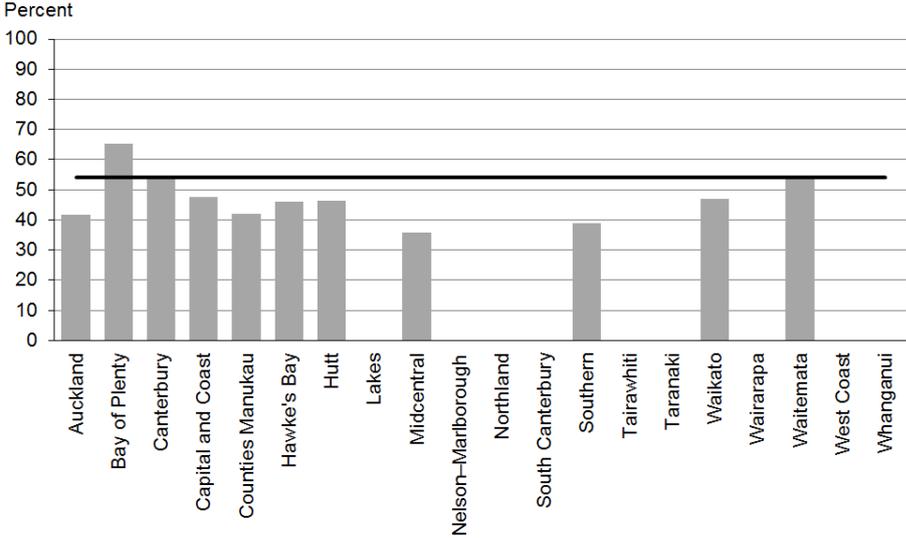
**Figure 42: Exclusively or fully breastfed at three months, high deprivation**



**Figure 43: Exclusively or fully breastfed at three months, Māori**



**Figure 44: Exclusively or fully breastfed at three months, Pacific peoples**



**Data notes**

- No bar on graph = fewer than 20 infants in this category.
- Time period: infants aged three months between January 2013 and June 2013.
- Excludes overseas DHB and undefined DHB.
- Numerator: breastfeeding at three months = exclusive or fully (source: Plunket).
- Denominator: breastfeeding at three months = not null (source: Plunket).

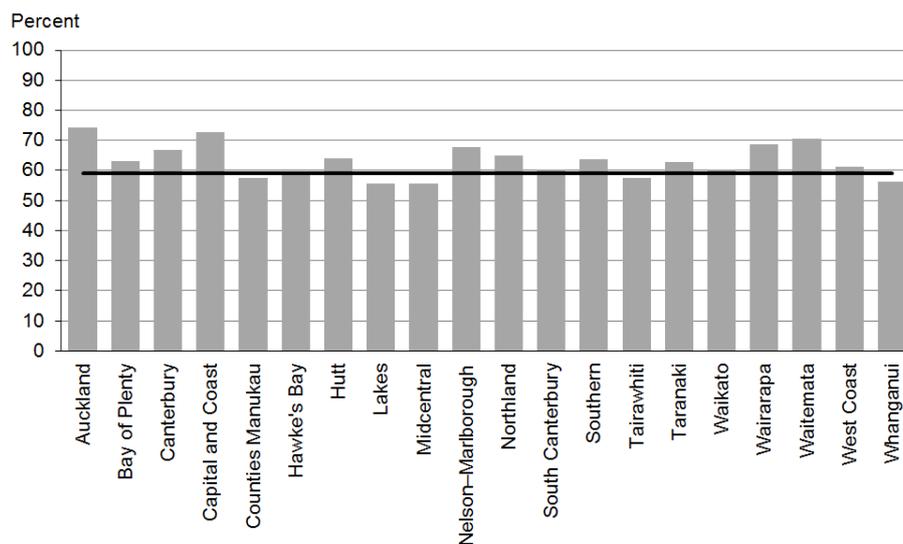
# WCTO Quality Improvement Framework

## Indicator 14

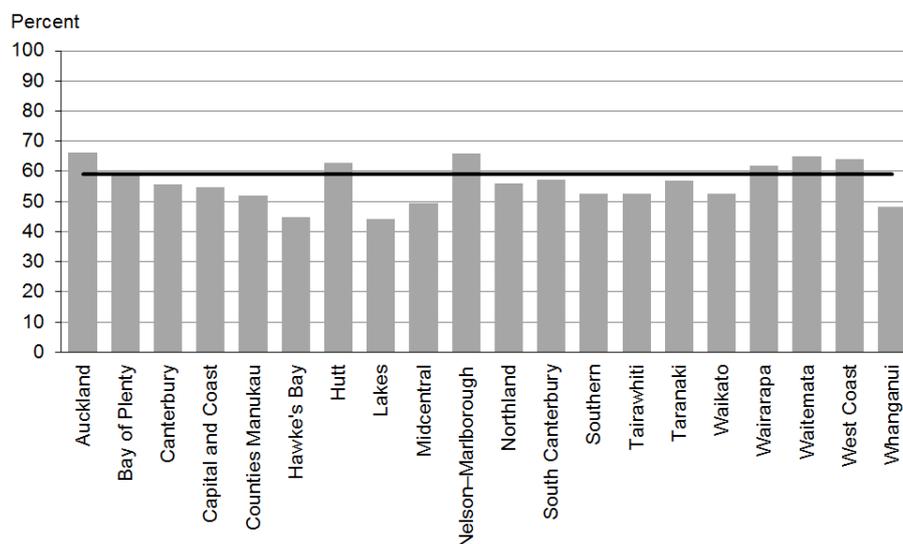
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Infants are receiving breast milk at six months of age
<b>Target by December 2014:</b>	59 percent
<b>Target by June 2016:</b>	65 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	65% (55–74)	55% (44–66)	52% (41–72)	59% (44–75)

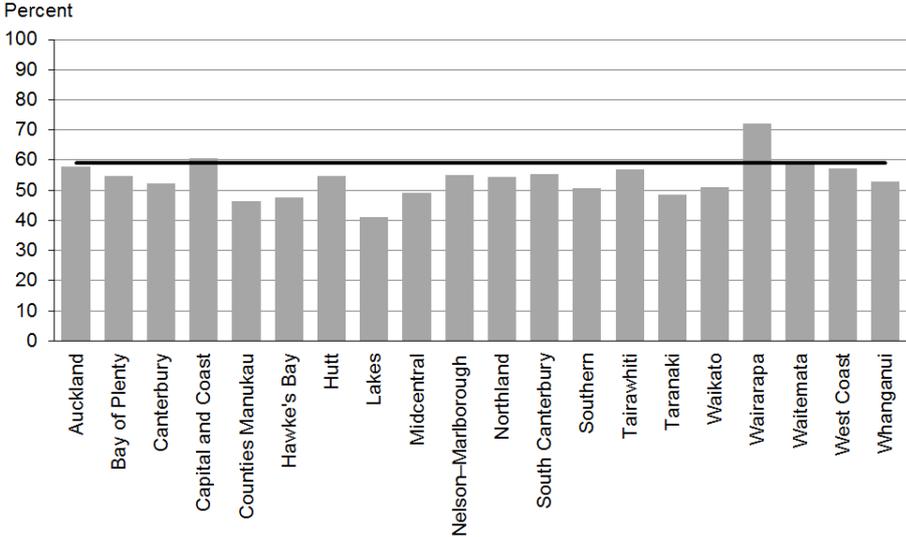
**Figure 45: Infants receive breast milk at six months, total New Zealand**



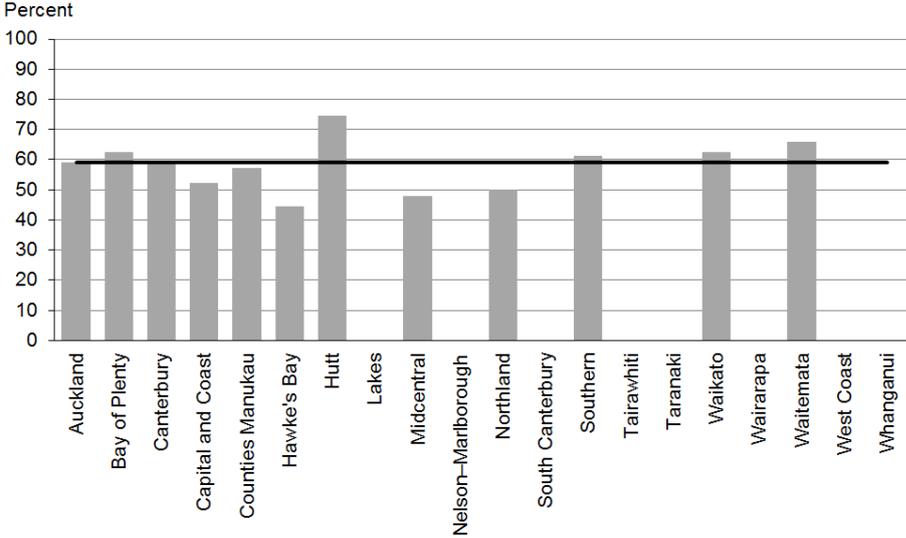
**Figure 46: Infants receive breast milk at six months, high deprivation**



**Figure 47: Infants receive breast milk at six months, Māori**



**Figure 48: Infants receive breastmilk at six months, Pacific peoples**



**Data notes**

- No bar on graph = fewer than 20 infants in this category.
- Time period: infants aged six months between January 2013 and June 2013.
- Excludes overseas DHB and undefined DHB.
- Numerator: breastfeeding at six months = exclusive, full or partial (source: Plunket).
- Denominator: breastfeeding at six months = not null (source: Plunket).

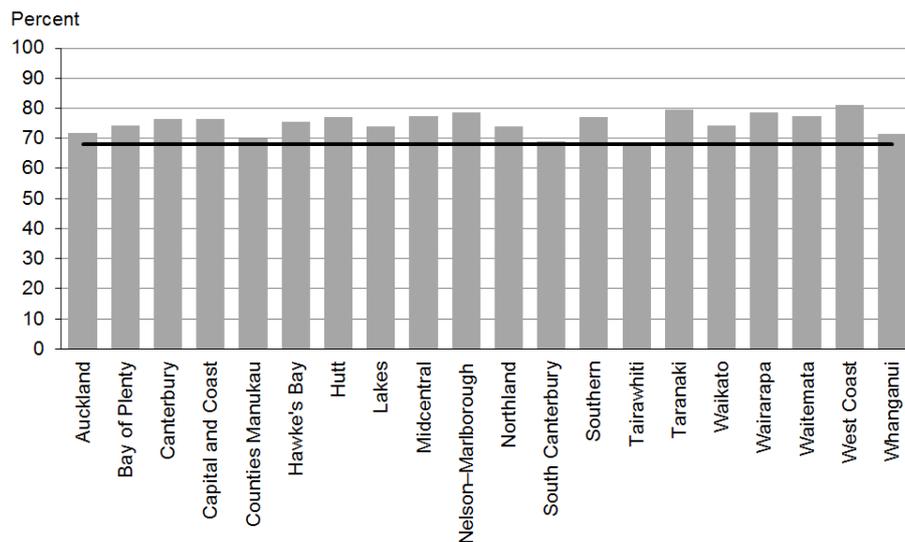
# WCTO Quality Improvement Framework

## Indicator 15

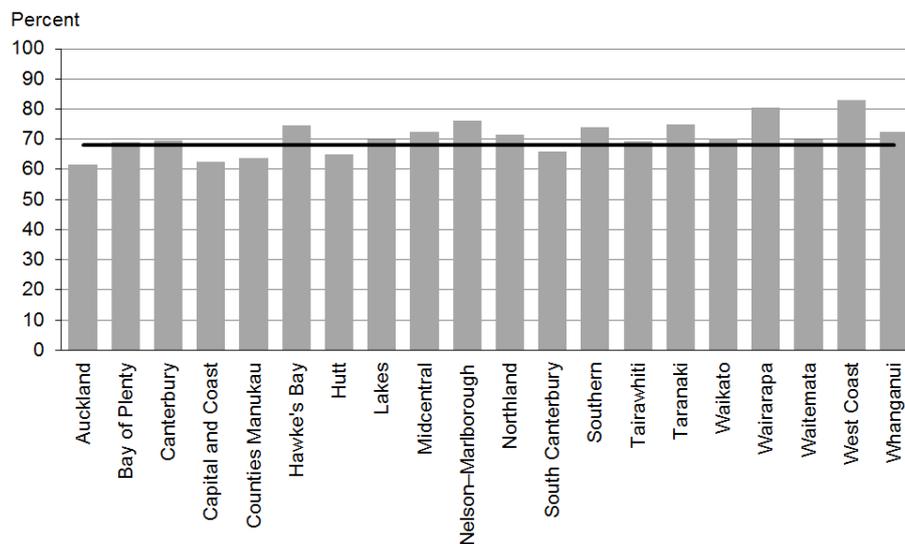
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Children are a healthy weight at four years
<b>Target by December 2014:</b>	68 percent
<b>Target by June 2016:</b>	75 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	75% (68–81)	68% (62–83)	70% (66–81)	58% (49–100)

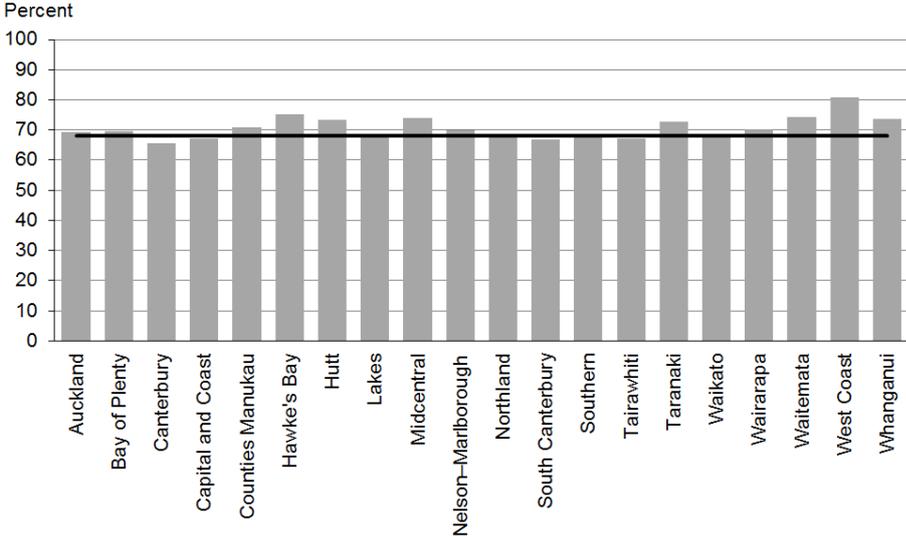
**Figure 49: Children are a healthy weight at age four years, total New Zealand**



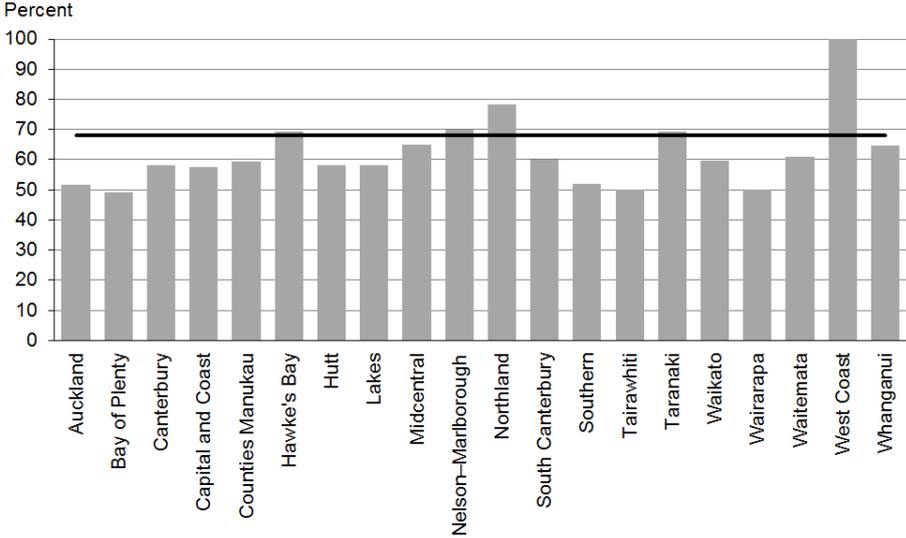
**Figure 50: Children are a healthy weight at age four years, high deprivation**



**Figure 51: Children are a healthy weight at age four years, Māori**



**Figure 52: Children are a healthy weight at age four years, Pacific peoples**



**Data notes**

- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: children with a BMI between the 5th and 84th percentile at B4 School Check (source: B4 School Check).
- Denominator: children with a BMI recorded at B4 School Check (source: B4 School Check).

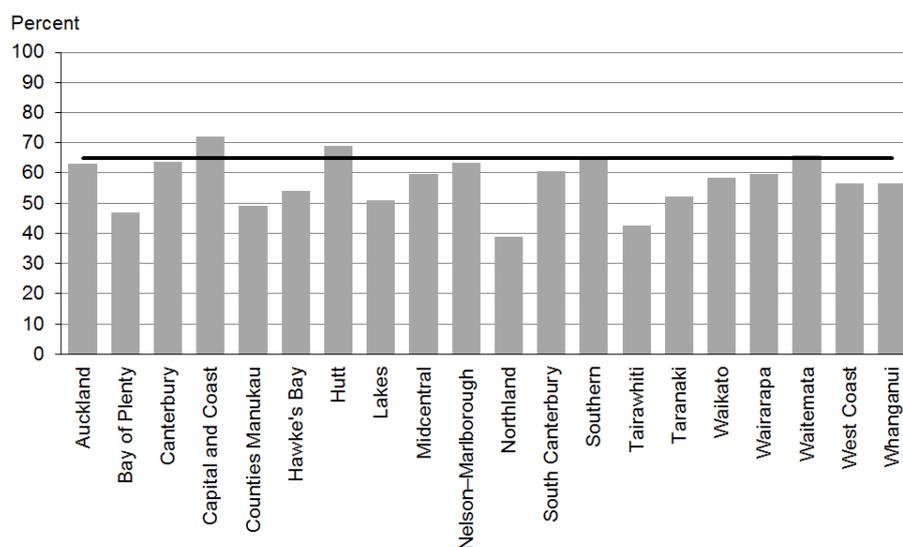
# WCTO Quality Improvement Framework

## Indicator 16

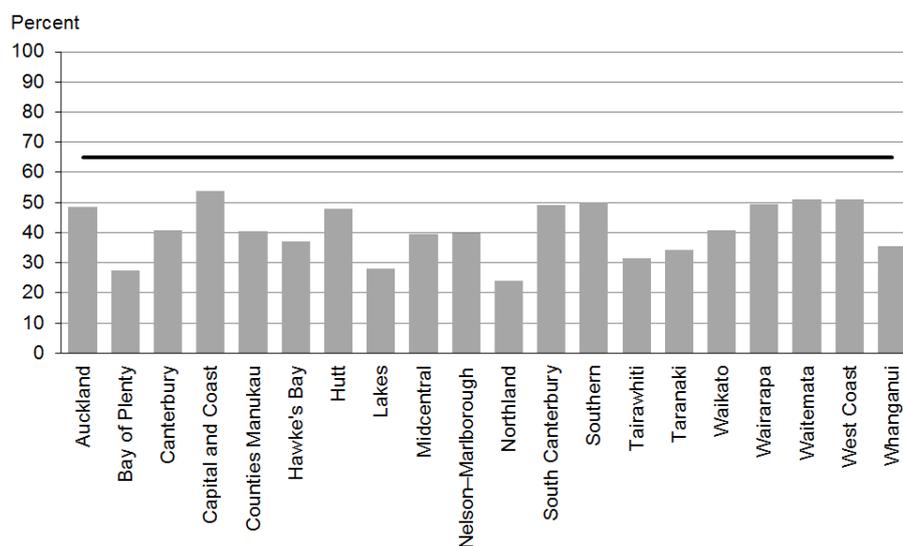
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Children are caries free at five years
<b>Target by December 2014:</b>	65 percent
<b>Target by June 2016:</b>	65 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	59% (39–72)	N/A	39% (24–54)	37% (25–56)

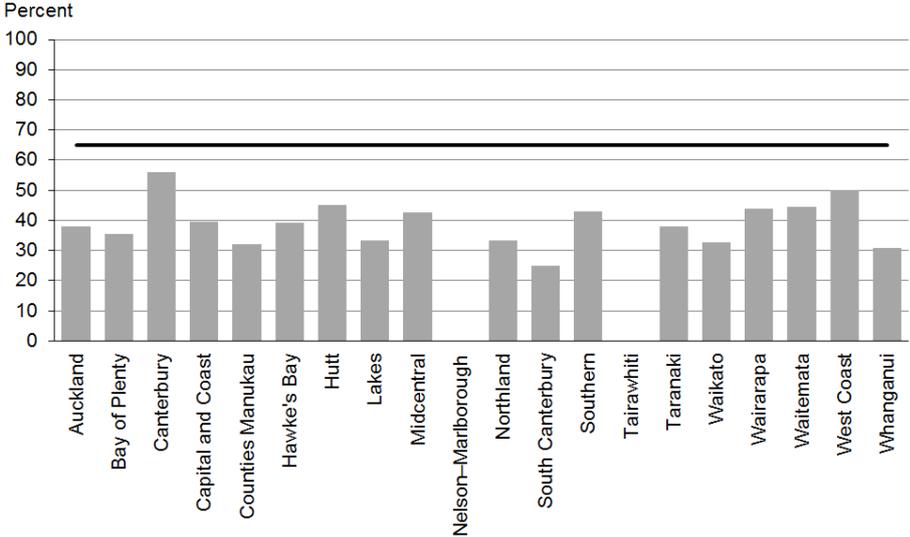
**Figure 53: Caries free at five years, total New Zealand**



**Figure 54: Caries free at five years, Māori**



**Figure 55: Caries free at five years, Pacific peoples**



**Data notes**

- No bar on graph = no children in this category.
- Time period: children turning five years between 1 January 2012 and 31 December 2012.
- Excludes overseas DHB and undefined DHB.
- Data is not available by deprivation quintile.
- Numerator: number of five-year-old children caries free (source: Oral Health).
- Denominator: number of five-year-old children enrolled with oral health (source: Oral Health).

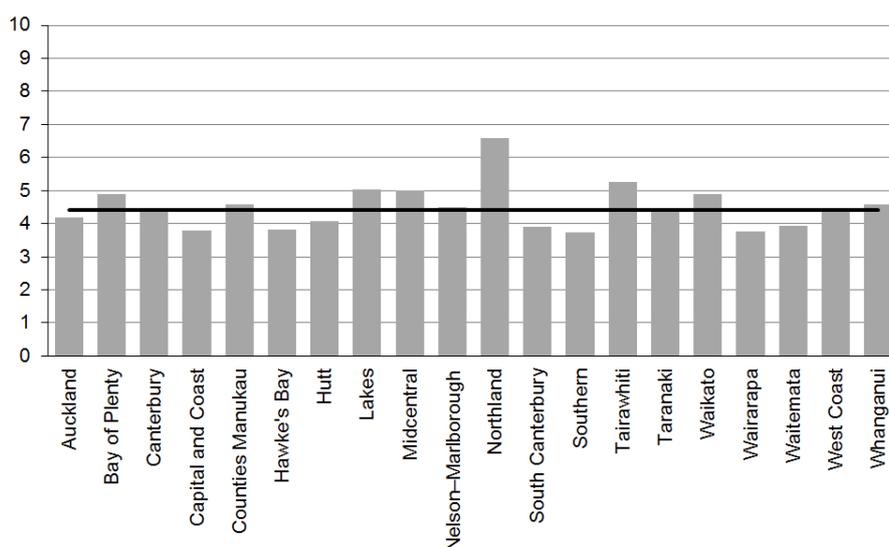
# WCTO Quality Improvement Framework

## Indicator 17

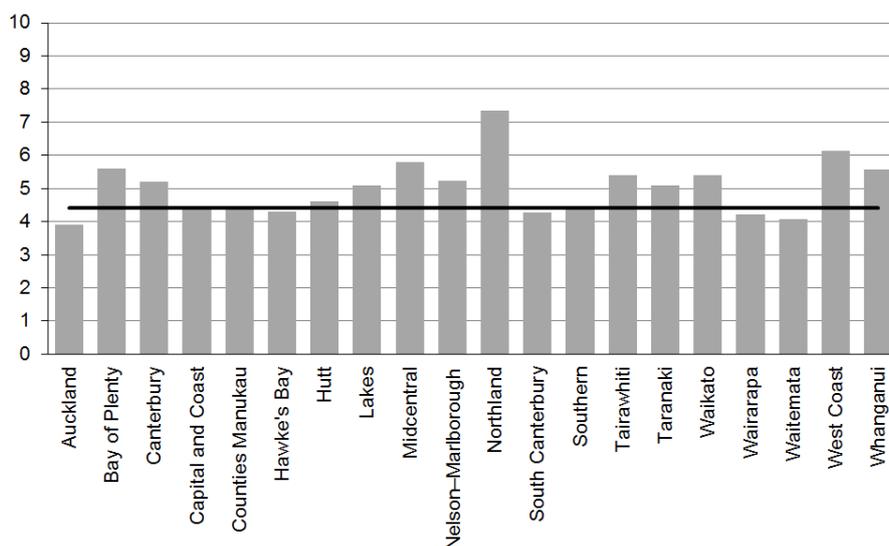
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Burden of dental decay is minimised
<b>Target by December 2014:</b>	4.4 dmft
<b>Target by June 2016:</b>	4 dmft

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	4.5 (6.6–3.7)	N/A	5.1 (7.3–3.9)	5.0 (10–2.8)

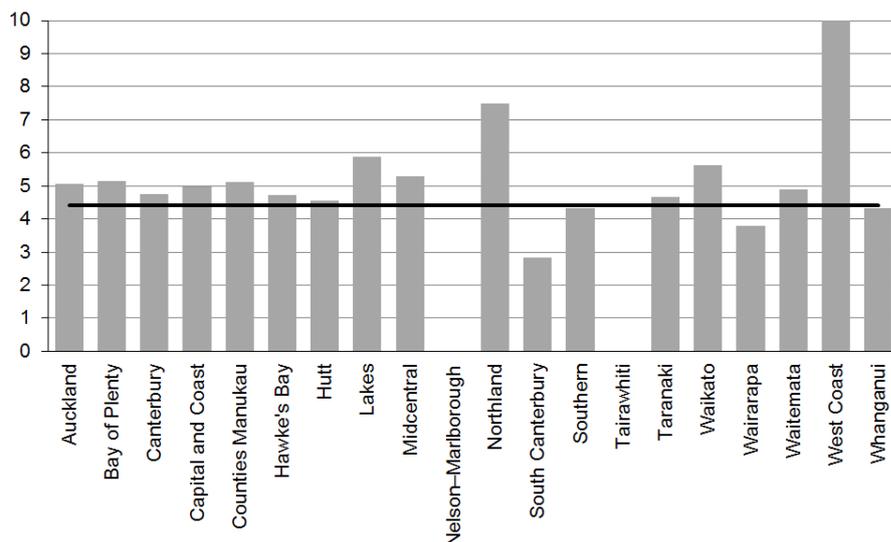
**Figure 56: Burden of dental decay, total New Zealand**



**Figure 57: Burden of dental decay, Māori**



**Figure 58: Burden of dental decay, Pacific peoples**



**Data notes**

- No bar on graph = no children in this category.
- The indicator measures the average dmft<sup>3</sup> score.
- Time period: children turning five years old between 1 January 2012 and 31 December 2012.
- Excludes overseas DHB and undefined DHB.
- Data is not available by deprivation quintile.
- Numerator: sum of dmft scores at five years old (source: Oral Health).
- Denominator: number of five-year-olds with a dmft score greater than zero (source: Oral Health).

<sup>3</sup> dmft is a count of decayed, missing or filled deciduous (baby) teeth.

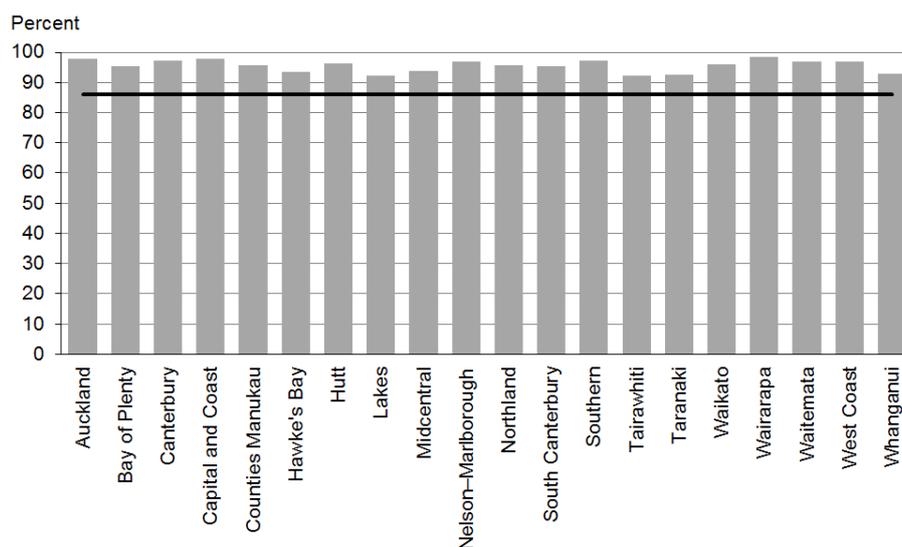
# WCTO Quality Improvement Framework

## Indicator 18

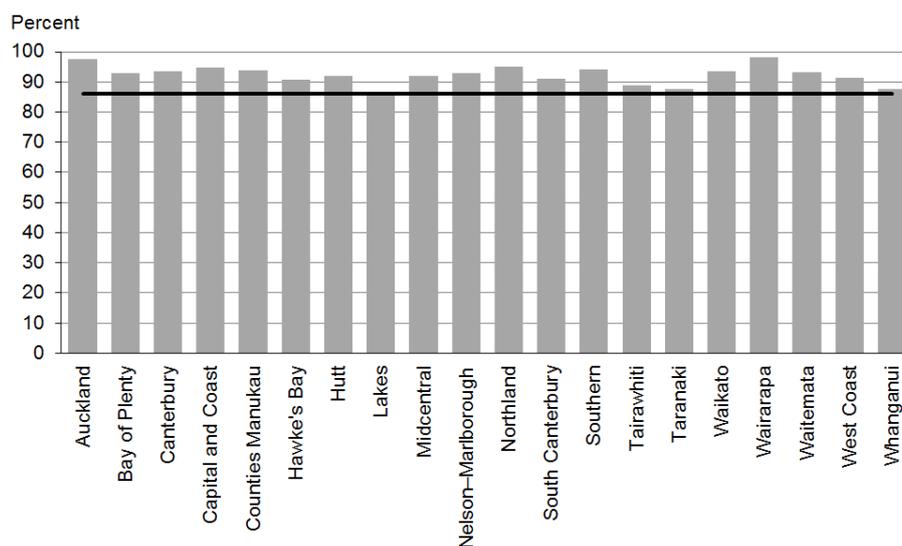
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Child mental health is supported (SDQ-P is within normal range at the B4 School Check) <sup>4</sup>
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	96% (92–98)	93% (85–98)	93% (87–99)	94% (83–100)

**Figure 59: Children have a normal SDQ-P score at four years, total New Zealand**

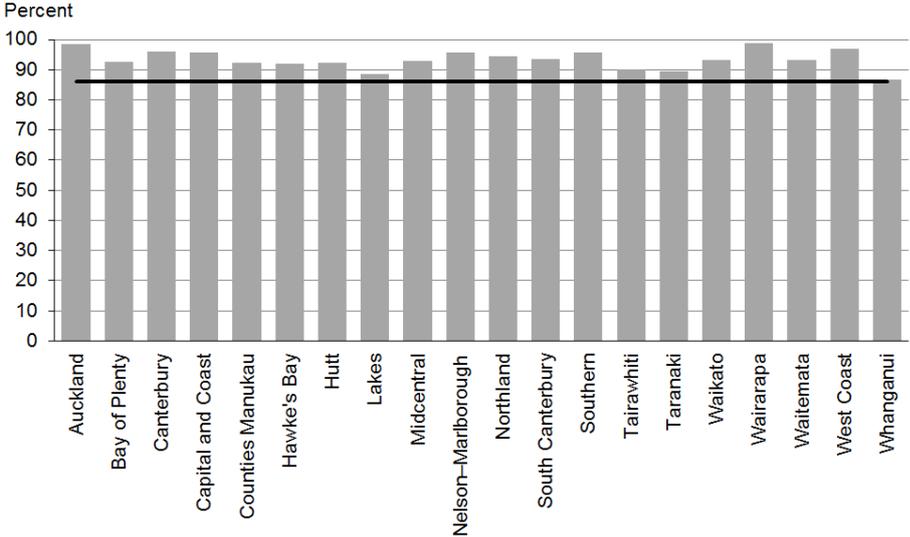


**Figure 60: Children have a normal SDQ-P score at four years, high deprivation**

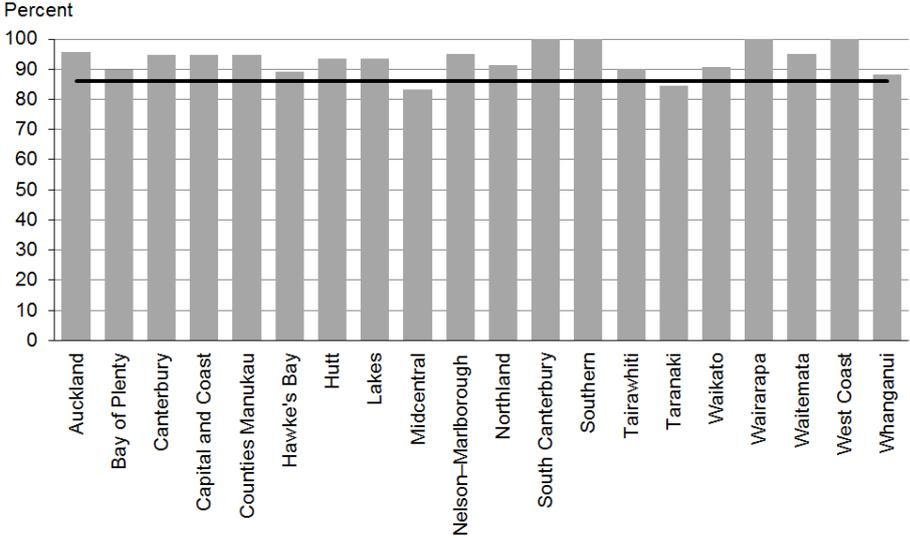


<sup>4</sup> The SDQ is used to assess a child's social and emotional development. There are two versions of the questionnaire: one for parents (SDQ-P), and the other for teachers (SDQ-T).

**Figure 61: Children have a normal SDQ-P score at four years, Māori**



**Figure 62: Children have a normal SDQ-P score at four years, Pacific peoples**



**Data notes**

- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: children with an SDQ-P score that is not abnormal (source: B4 School Check).
- Denominator: children with an SDQ-P score recorded at the B4 School Check (source: B4 School Check).

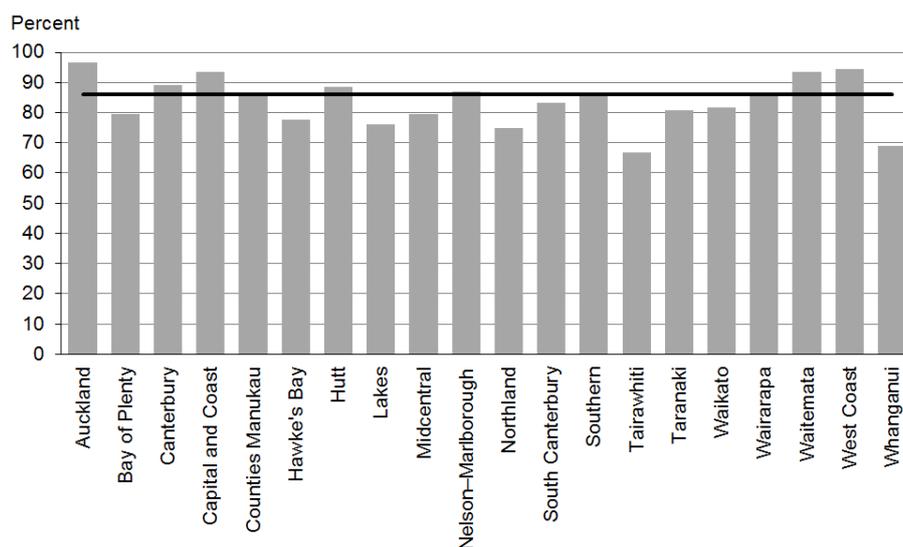
# WCTO Quality Improvement Framework

## Indicator 19

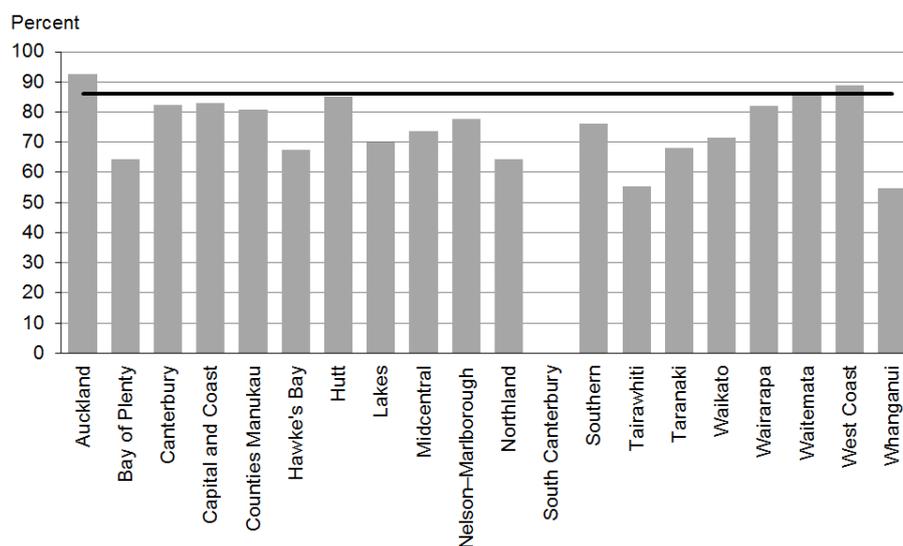
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Mothers are smokefree at two weeks postnatal
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	86% (67–96)	75% (55–93)	64% (48–89)	90% (79–100)

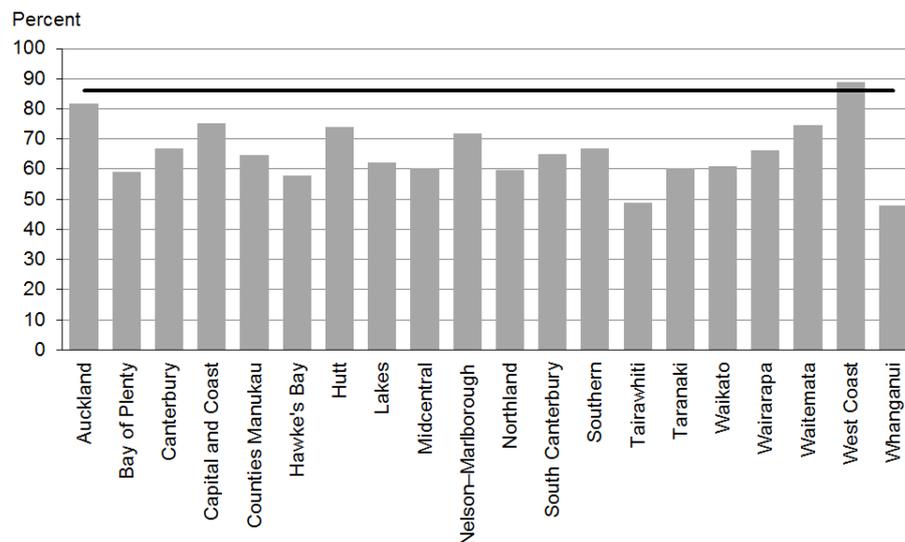
**Figure 63: Mother smokefree at two weeks postnatal, total New Zealand**



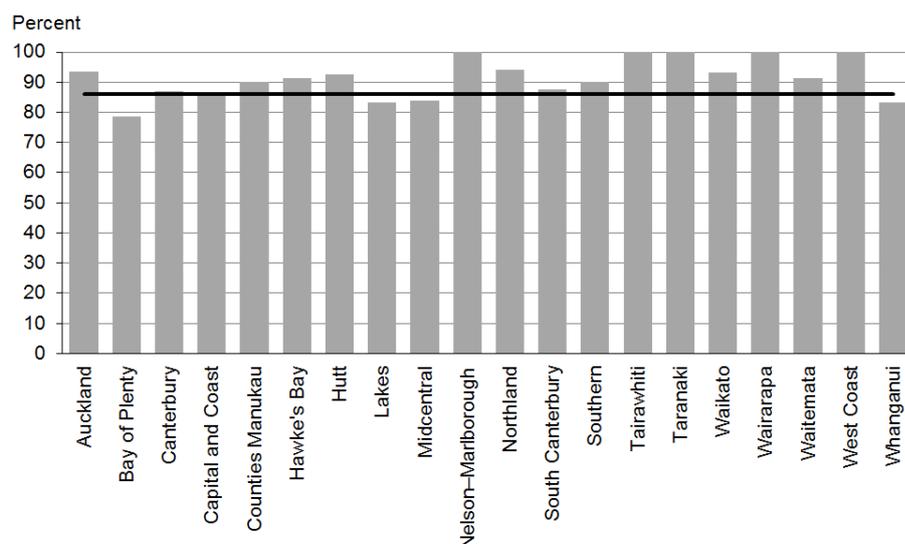
**Figure 64: Mother smokefree at two weeks postnatal, high deprivation**



**Figure 65: Mother smokefree at two weeks postnatal, Māori**



**Figure 66: Mother smokefree at two weeks postnatal, Pacific peoples**



**Data notes**

- Time period: births between January 2013 and June 2013.
- Excludes overseas DHB and undefined DHB.
- Numerator: maternal tobacco use (two weeks) = Y (source: MAT).
- Denominator: maternal tobacco use (two weeks) = Y or N (source: MAT).

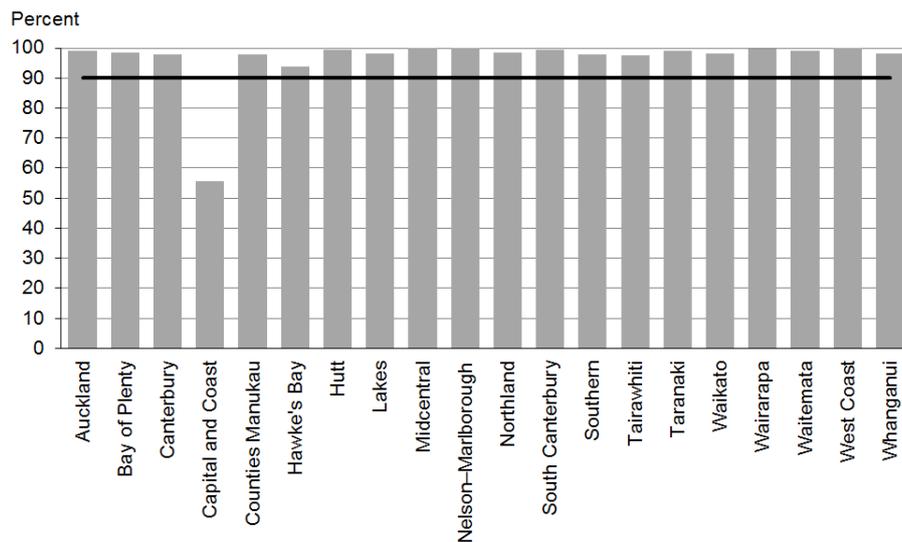
# WCTO Quality Improvement Framework

## Indicator 20

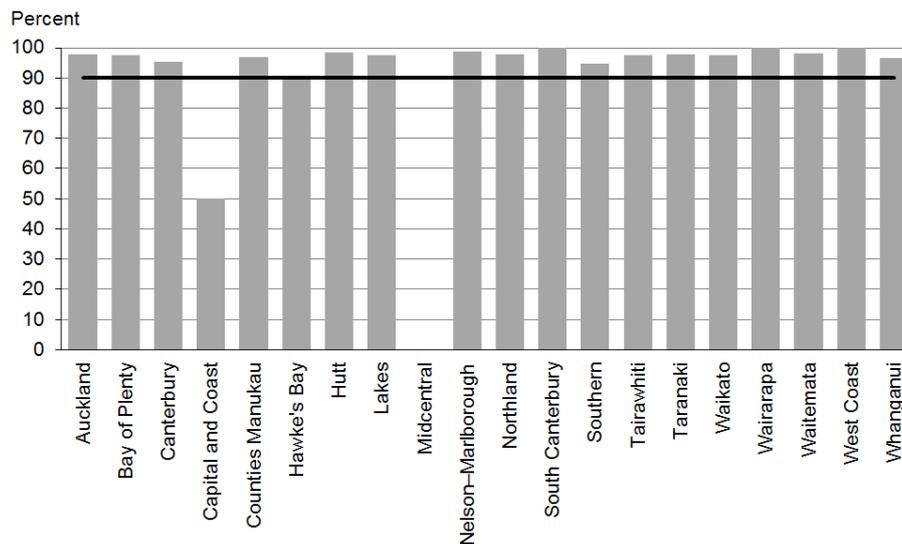
<b>Standard:</b>	WCTO providers use evidence-based interventions and education to promote child and family/whānau health and wellbeing
<b>Indicator:</b>	Children live in a smokefree home (age four years)
<b>Target by December 2014:</b>	90 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	98% (56–100)	97% (50–100)	96% (88–100)	98% (94–100)

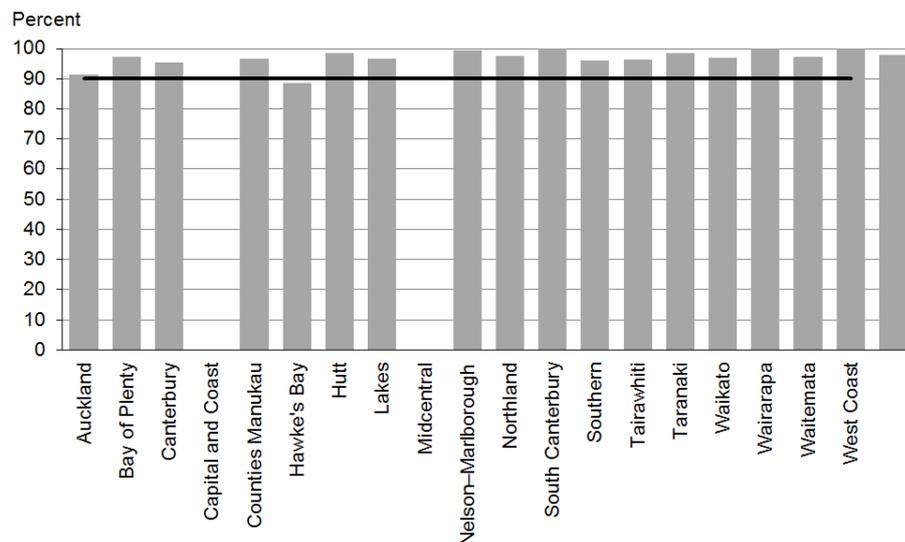
**Figure 67: Children live in a smokefree home (age four years), total New Zealand**



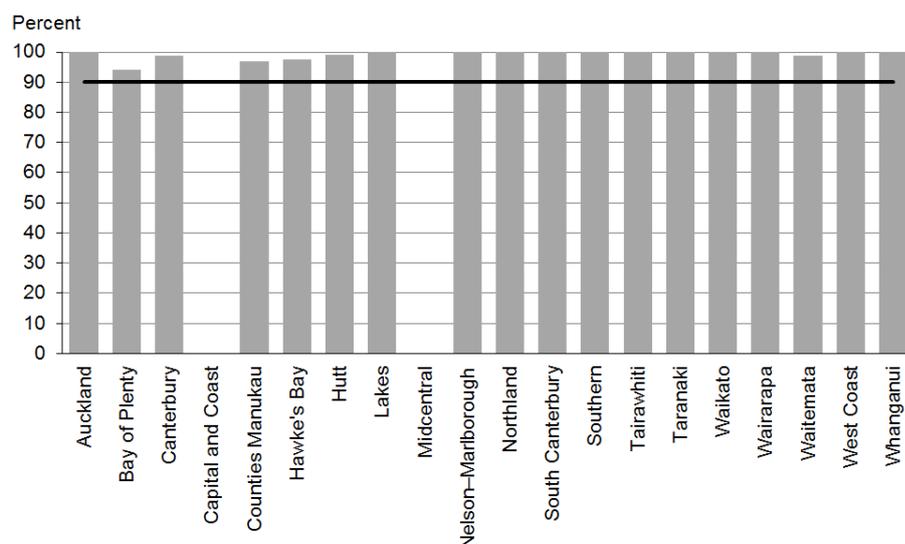
**Figure 68: Children live in a smokefree home (age four years), high deprivation**



**Figure 69: Children live in a smokefree home (age four years), Māori**



**Figure 70: Children live in a smokefree home (age four years), Pacific peoples**



**Data notes**

- This indicator relates to parental smoking indoors at home.
- No bar on graph = smokefree at-home status not reported.
- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: children with smokefree home = Y (source: B4 School Check)
- Denominator: children with smokefree home = Y or N (source: B4 School Check).

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# Indicators 21–27: Quality

Aim 3 of the WCTO Quality Improvement Framework seeks **best value for health system resource**. To achieve this, advice, screening and interventions must be based on the best available evidence and delivered to a consistently high quality. This ensures best value for money, because health or development issues are:

- identified accurately (reducing downstream costs related to poor sensitivity, and wastage due to poor specificity)
- treated early (reducing the intensiveness of the intervention required) through interventions that have the best evidence of success (maximising health gain for investment).

Indicators 21–27 measure the quality of service delivery; in other words, the adherence to best practice (either in the timing of the intervention or adherence to screening protocol) in delivering components of the WCTO programme. The current indicators focus exclusively on the B4 School Check due to the limited availability of data for other parts of the WCTO programme. It is expected that additional indicators to monitor the quality of WCTO service delivery will be added over time.

## Summary of results for this period

### National

Indicator 21: B4 School Checks are started before children are 4½ seeks to ensure that children with additional health or development needs can receive appropriate support or intervention before starting school to minimise the impact of any issues on their readiness to learn at school. Nationally, 82 percent of B4 School Checks are started before age 4½, exceeding the 2014 target of 81 percent, but dropping one percentage point nationally, one percentage point among high deprivation children and three percentage points among Pacific peoples since the last report.

Nationally, Indicator 24: Referral for oral health concerns and Indicator 27: Referral for extreme obesity both show improvement since the last report (59 percent vs 51 percent, and 69 percent versus 63 percent, respectively) but still remain lower than expected, and significantly lower than the December 2014 target of 86 percent each. Child oral health services are free and have the capacity to see all children regularly. Providers should discuss with parents the importance of oral health care, including regular visits to community oral health services, and should ensure all children with obvious decay are referred. Extreme obesity (a BMI greater than the 99.4th percentile) should be referred as described in the practitioner handbook; as a minimum, to primary care to ensure that the health impacts of obesity are managed appropriately. In almost all areas, primary care is free for under-sixes.

Indicators 25 and 26 measure referral to specialist services where a hearing or vision problem is identified. Following previous quality improvement efforts and commitment by B4 School Check providers, vision and hearing technicians and specialist audiology and optometry/ ophthalmology services, 100 percent of children with an identified issue are referred – across all regions, deprivation quintiles and ethnic groups. This is a significant achievement for the B4 School Check programme and ensures children receive the support they need so that the impact of hearing or vision problems on a child's ability to learn and develop is minimised. Since the last report this has been maintained.

Referral (including advice) rates for several indicators are high or have reached 100 percent across all regions, deprivation quintiles and ethnic groups, however rates of referrals (excluding advice) vary significantly by DHB. In some instances, giving advice will be the most pragmatic approach to meeting a need identified through the B4 School Check. However, in most cases, referral, at least to the child's GP, is both expected and represents best practice.

## **By region**

Nationally, although 82 percent of B4 School Checks are started before age 4½, there is significant variation by region (Indicator 21: 20 to 99 percent). There is also significant variation by region for rates of referral by DHB for oral health concerns (Indicator 24: 6 to 95 percent – excluding 'advice given') extreme obesity (Indicator 26: 29 to 100 percent – excluding 'advice given'). DHBs and B4 School Check providers should investigate referral protocol and referral options in regions with high rates of referral to establish appropriate local pathways, and then build local capacity of specialist services where required.

## **By deprivation**

Unlike other indicators, performance against these seven quality-related indicators does not seem to be lower for children living in areas of high deprivation. All indicators except for Indicator 21: B4 School Checks are started before children are 4½, showed improvement or maintained performance at 100% since the last report. Referral rates for Indicator 24: Children with a Lift the Lip (LTL) score of 2–6 and Indicator 27: Children with BMI greater than the 99.4th percentile are higher than the overall population rates at 66 versus 59 percent and 74 versus 69 percent, respectively (both excluding 'advice given').

## **By ethnicity**

Quality of service delivery (adherence to protocol) within the indicators presented here on the whole does not seem to be significantly different for different ethnic groups. Five of seven quality indicators for Māori children showed improvement since the last report and six of seven indicators for Pacific children showed improvement since the last report. Māori children with extreme obesity were still less likely to be referred (59 versus 69 percent nationally). However, referral rates for Pacific children with extreme obesity were higher than national rates at 74 percent. Providers should ensure that consistent, evidence-based protocols are applied across all services and service providers to ensure all families and whānau have access to high-quality services.

# WCTO Quality Improvement Framework

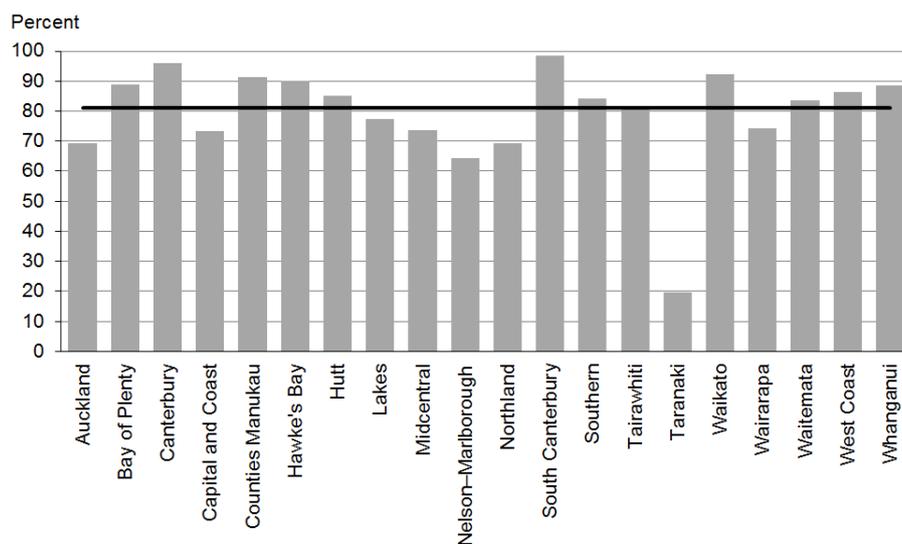
## Indicator 21

<b>Standard:</b>	WCTO services are delivered at the right time
<b>Indicator:</b>	B4 School Checks are started before children are 4½
<b>Target by December 2014:</b>	81 percent
<b>Target by June 2016:</b>	90 percent

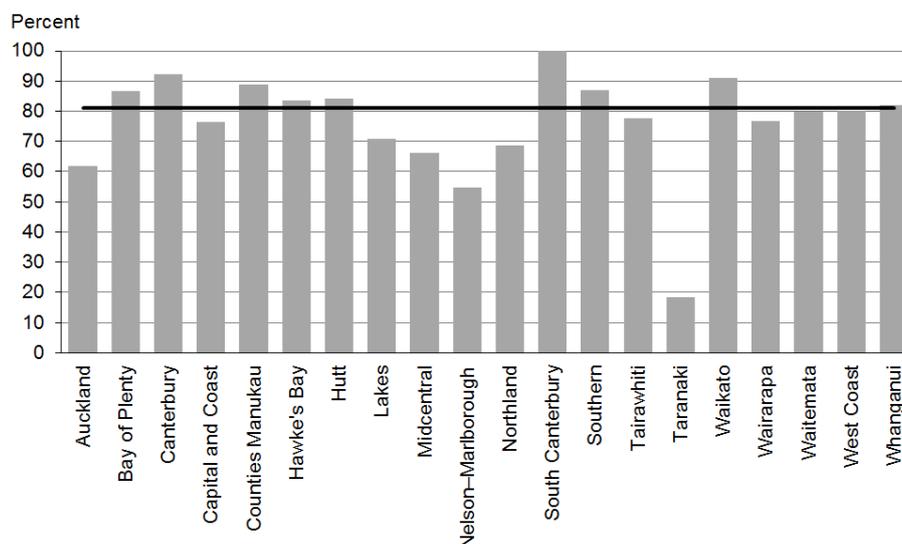
  

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range)	82% (20–99)	80% (18–100)	77% (26–100)	81% (31–100)

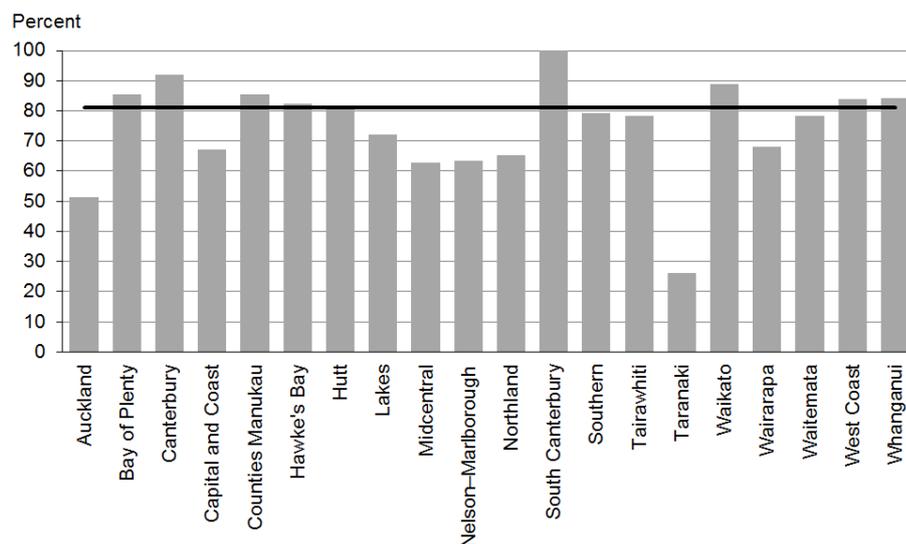
**Figure 71: B4 School Check started before age 4½ years, total New Zealand**



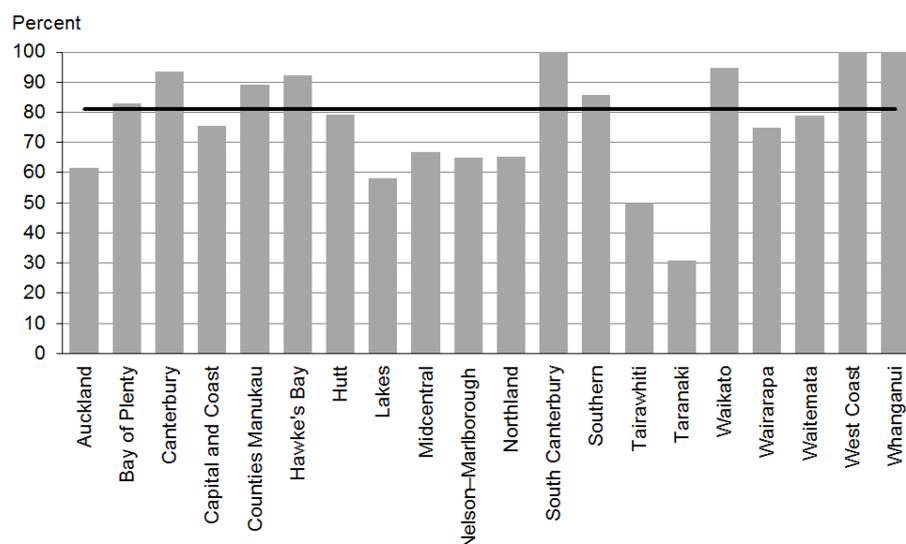
**Figure 72: B4 School Check started before age 4½ years, high deprivation**



**Figure 73: B4 School Check started before age 4½ years, Māori**



**Figure 74: B4 School Check started before age 4½ years, Pacific peoples**



**Data notes**

- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: number of children receiving a B4 School Check who started the check aged less than 4½ years (source: B4 School Check).
- Denominator: number of children receiving a B4 School Check (source: B4 School Check).

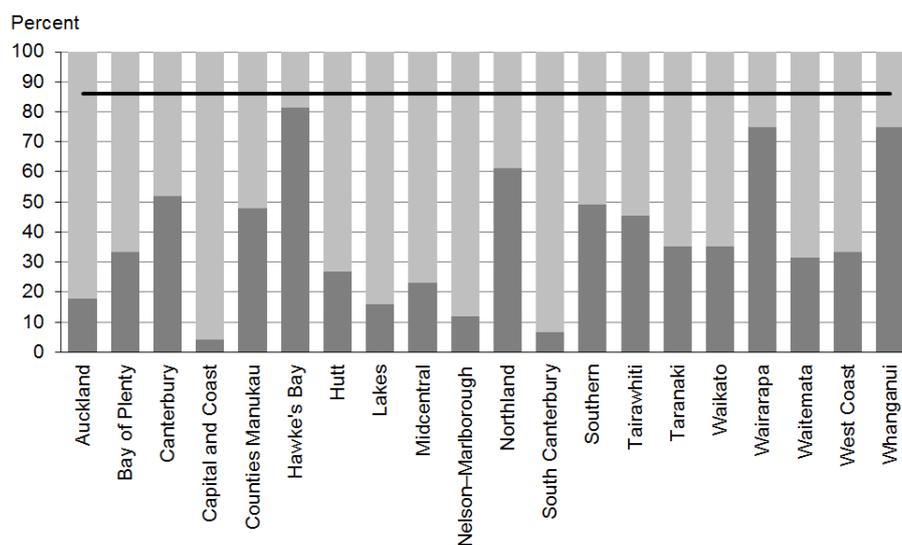
# WCTO Quality Improvement Framework

## Indicator 22

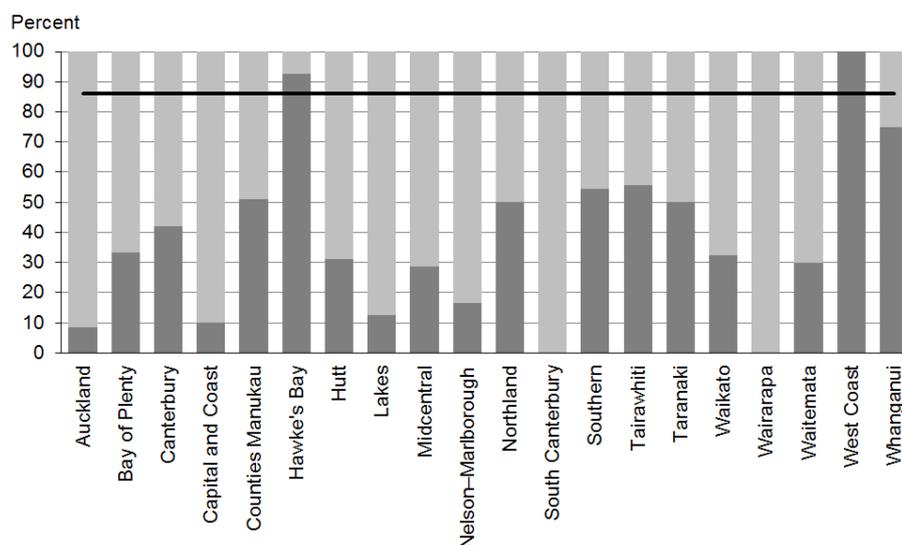
<b>Standard:</b>	WCTO providers deliver services in accordance with best practice (inappropriate variation is reduced)
<b>Indicator:</b>	Children with an abnormal SDQ-P at the B4 School Check are referred
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range) – including advice given	100%	100%	100%	100%
March 2014 mean (range) – excluding advice given	38% (4–81)	42% (0–100)	40% (0–84)	28% (0–100)

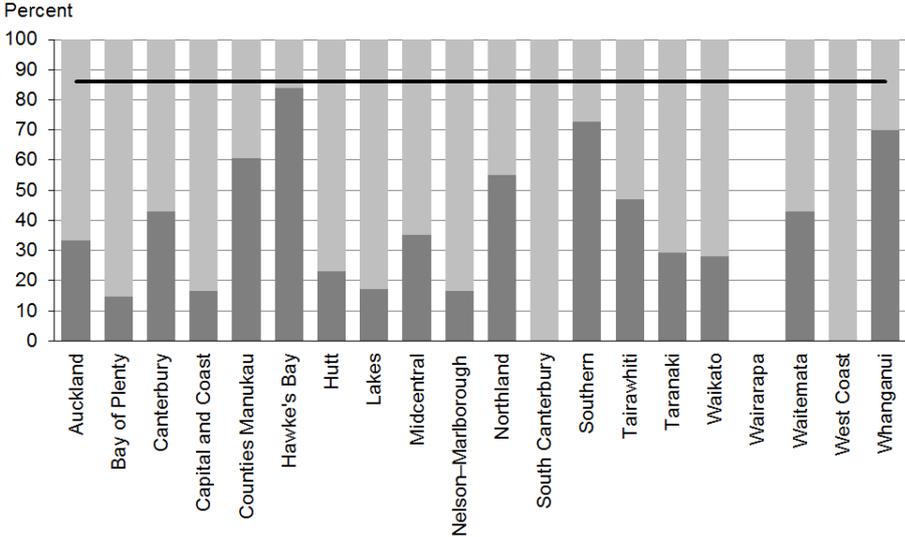
**Figure 75: Abnormal SDQ-P referred, total New Zealand**



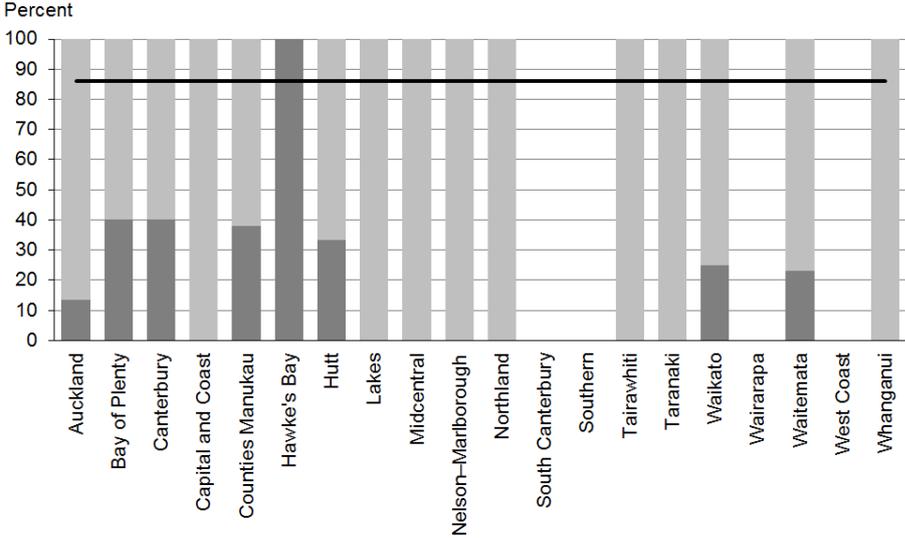
**Figure 76: Abnormal SDQ-P referred, high deprivation**



**Figure 77: Abnormal SDQ-P referred, Māori**



**Figure 78: Abnormal SDQ-P referred, Pacific peoples**



**Data notes**

- Stacked bar shows rate of referral excluding 'advice given' and rate of referral including 'advice given'.
- No bar on graph = no children with abnormal SDQP for that population.
- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: number of children with an abnormal SDQ-P referred (source: B4 School Check).
- Denominator: number of children with an abnormal SDQ-P (excluding those already under care) (source: B4 School Check).

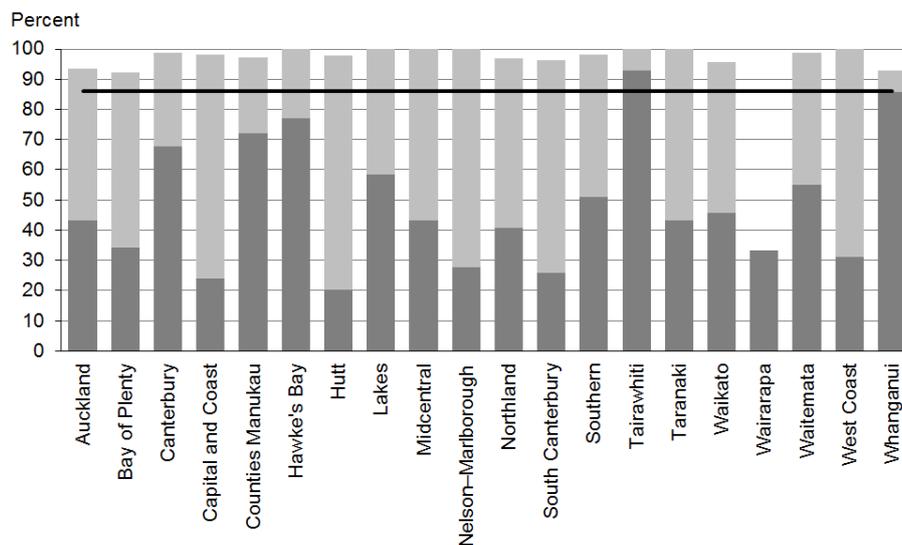
# WCTO Quality Improvement Framework

## Indicator 23

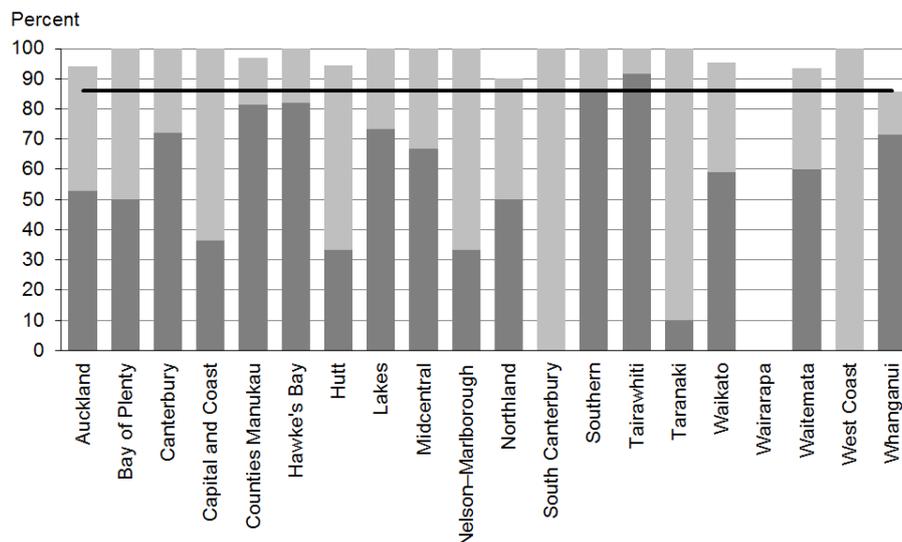
<b>Standard:</b>	WCTO providers deliver services in accordance with best practice (inappropriate variation is reduced)
<b>Indicator:</b>	Children with a PEDS Pathway A at the B4 School Check are referred
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range) – including advice given	97% (33–100)	97% (86–100)	98% (88–100)	94% (75–100)
March 2014 mean (range) – excluding advice given	50% (20–93)	62% (0–92)	60% (0–100)	52% (0–100)

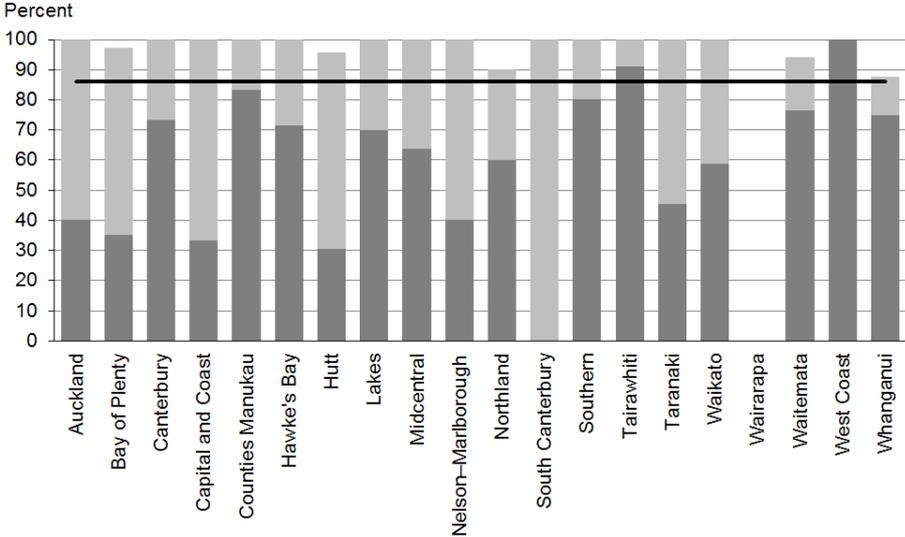
**Figure 79: PEDS pathway A referred, total New Zealand**



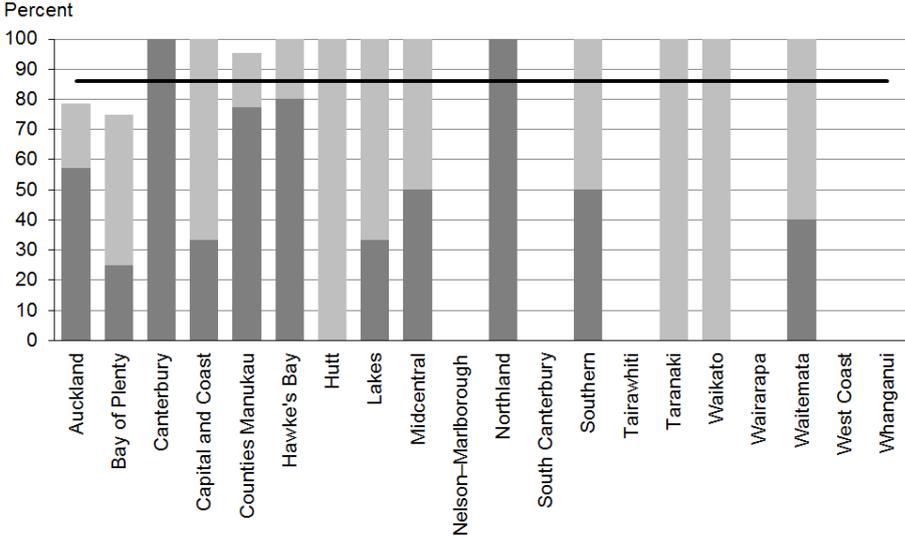
**Figure 80: PEDS pathway A referred, high deprivation**



**Figure 81: PEDS pathway A referred, Māori**



**Figure 82: PEDS pathway A referred, Pacific peoples**



**Data notes**

- Stacked bar shows rate of referral excluding 'advice given' and rate of referral including 'advice given'.
- No bar on graph = no children with PEDS Pathway A for that population.
- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: number of children assessed as PEDS Pathway A referred (source: B4 School Check).
- Denominator: number of children assessed as PEDS Pathway A (excluding those already under care) (source: B4 School Check).

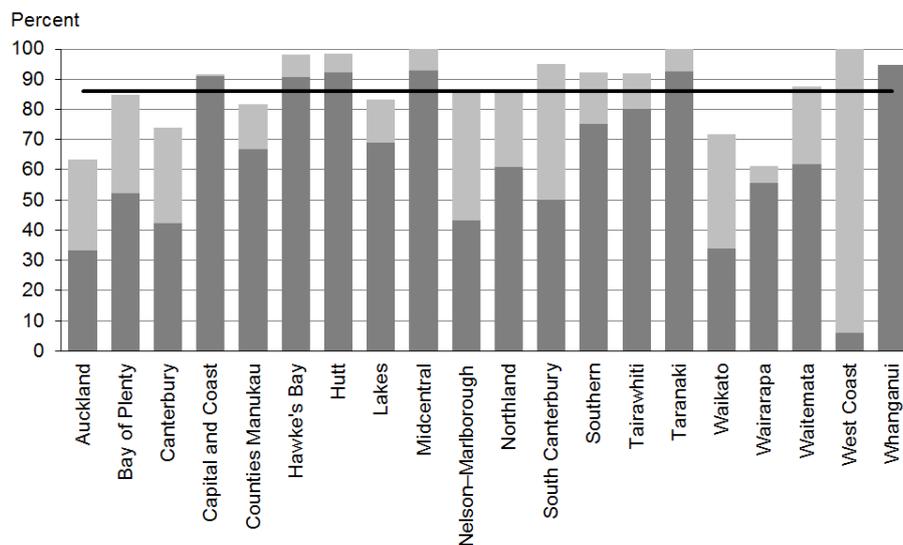
# WCTO Quality Improvement Framework

## Indicator 24

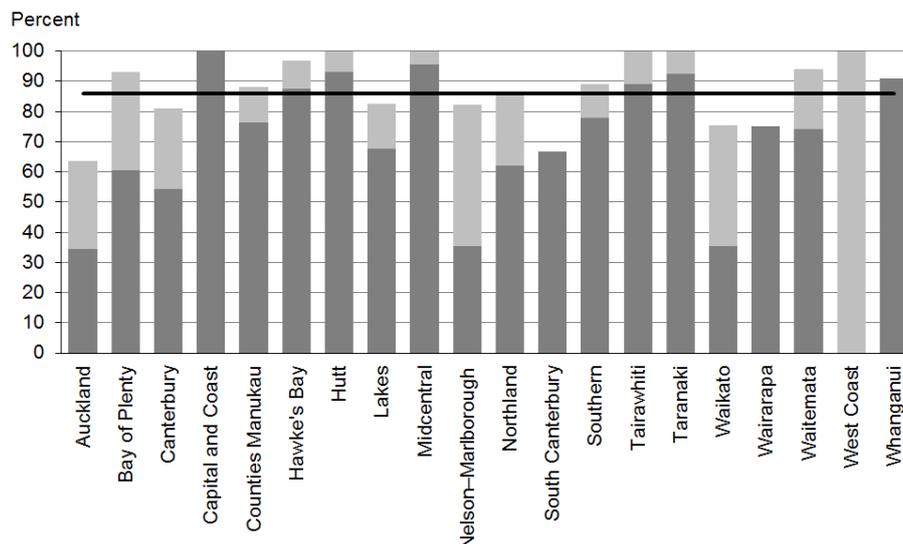
<b>Standard:</b>	WCTO providers deliver services in accordance with best practice (inappropriate variation is reduced)
<b>Indicator:</b>	Children with a Lift the Lip (LTL) score of 2–6 at the B4 School Check are referred
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range) – including advice given	82% (61–100)	85% (64–100)	85% (58–100)	81% (50–100)
March 2014 mean (range) – excluding advice given	59% (6–95)	66% (34–100)	64% (35–97)	64% (32–100)

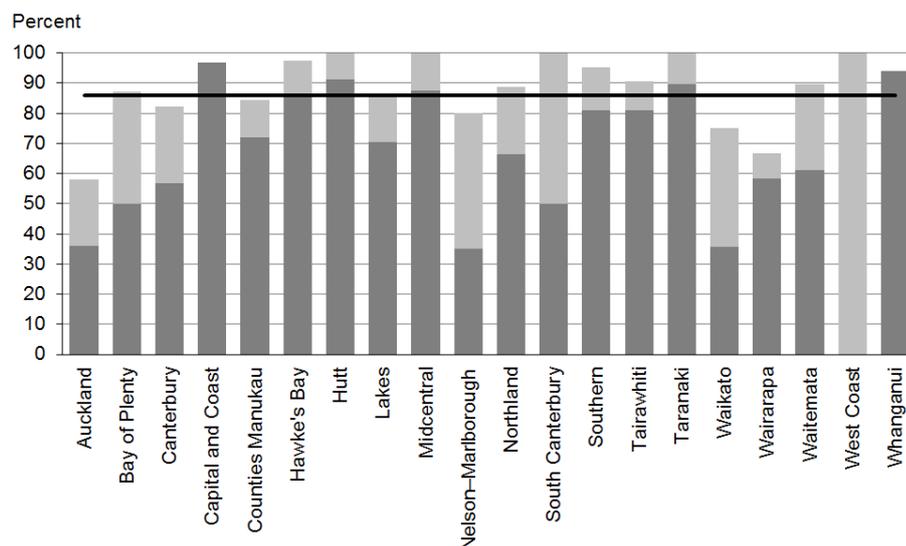
**Figure 83: Children with LTL score > 1 referred, total New Zealand**



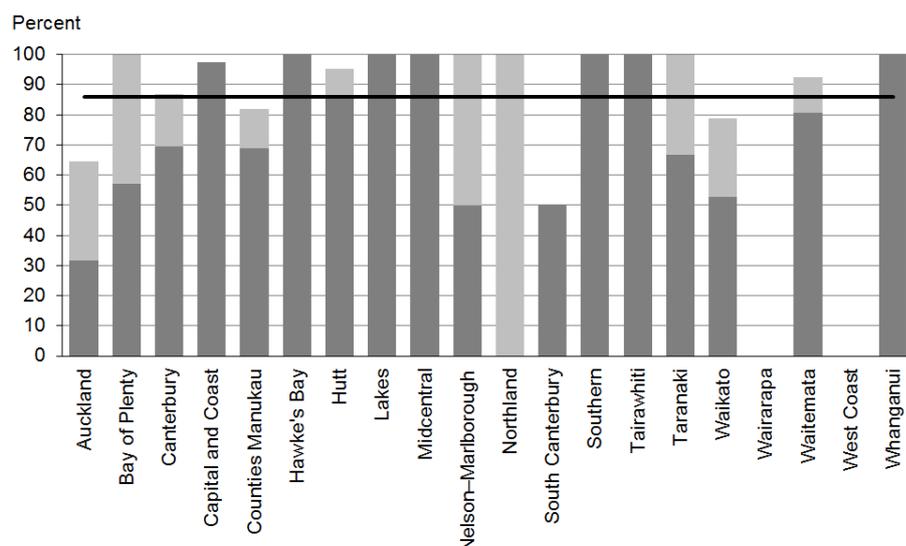
**Figure 84: Children with LTL score > 1 referred, high deprivation**



**Figure 85: Children with LTL score > 1 referred, Māori**



**Figure 86: Children with LTL score > 1 referred, Pacific peoples**



**Data notes**

- Stacked bar shows rate of referral excluding 'advice given' and rate of referral including 'advice given'.
- No bar on graph = no children with LTL score 2–6 for that population.
- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: number of children with LTL score of 2–6 referred (B4 School Check).
- Denominator: number of children with LTL score of 2–6 (excluding those already under care) (B4 School Check).

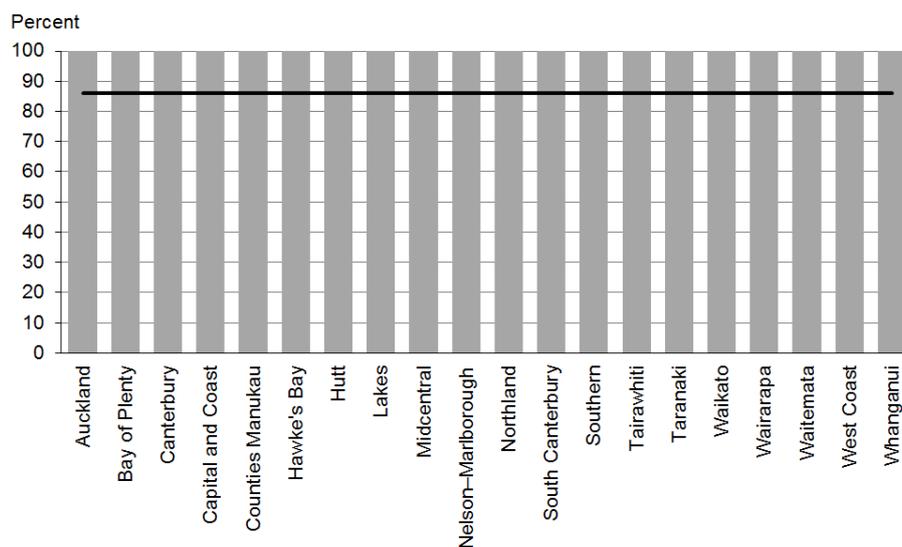
# WCTO Quality Improvement Framework

## Indicator 25

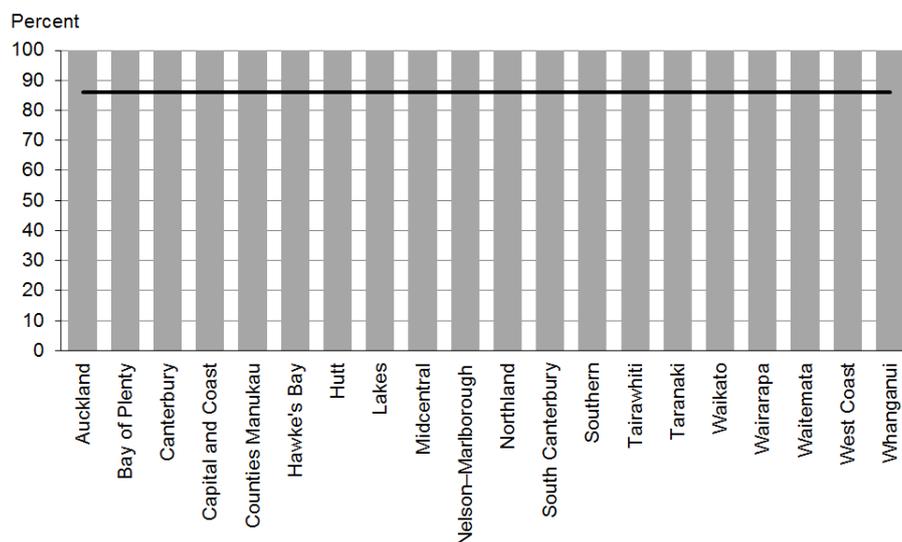
<b>Standard:</b>	WCTO providers deliver services in accordance with best practice (inappropriate variation is reduced)
<b>Indicator:</b>	Children with an untreated vision problem at the B4 School Check are referred
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range) – including advice given	100%	100%	100%	100%
March 2014 mean (range) – excluding advice given	100%	100%	100%	100%

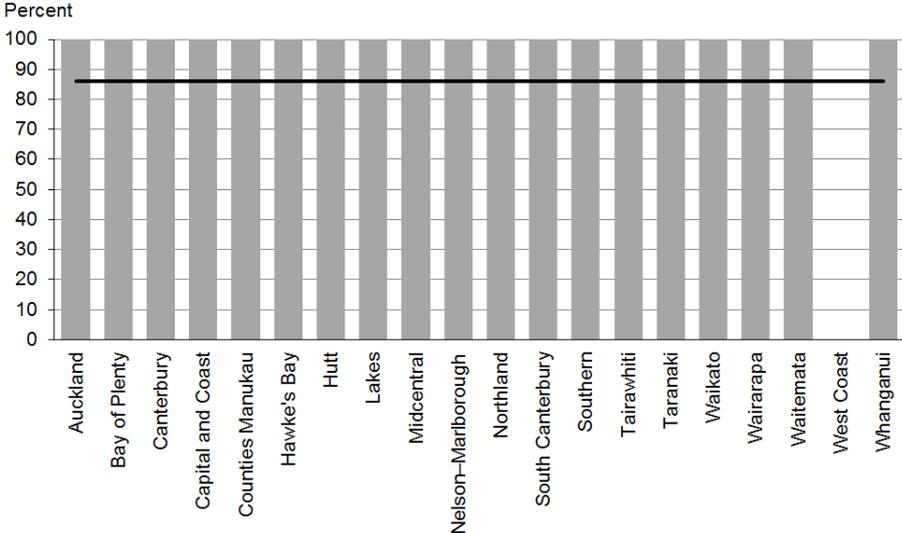
**Figure 87: Vision problem referred, total New Zealand**



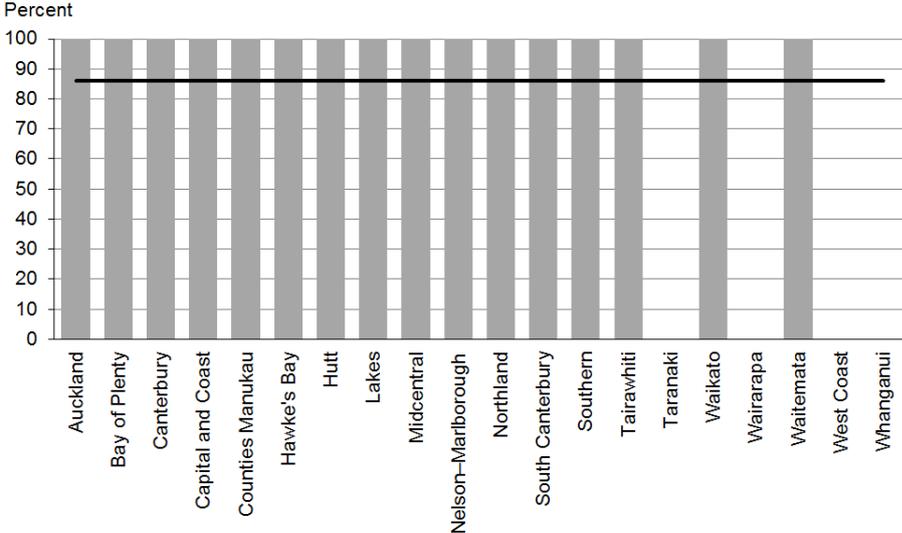
**Figure 88: Vision problem referred, high deprivation**



**Figure 89: Vision problem referred, Māori**



**Figure 90: Vision problem referred, Pacific peoples**



**Data notes**

- No bar on graph = no children with vision problem for that population.
- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: number of children with a vision problem referred (excluding advice given) (source: B4 School Check).
- Denominator: number of children with a vision problem (excluding those already under care) (source: B4 School Check).

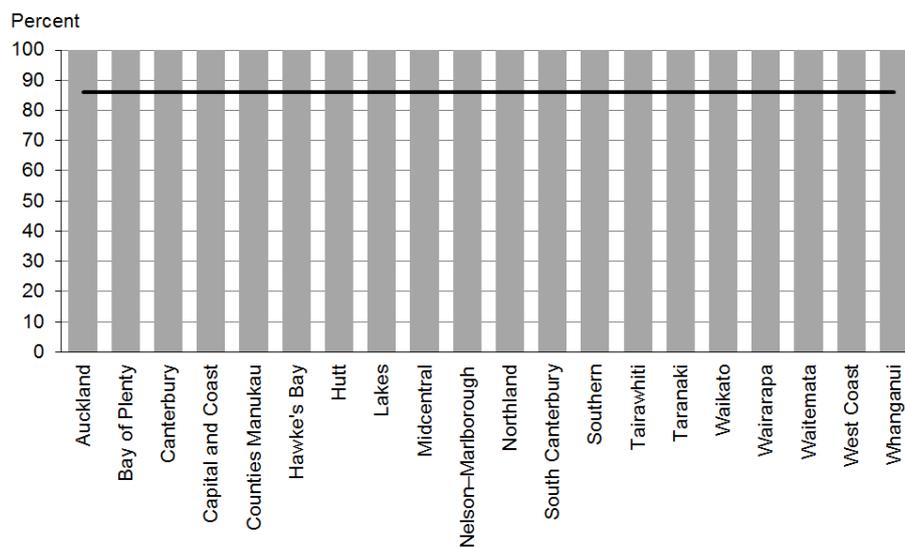
# WCTO Quality Improvement Framework

## Indicator 26

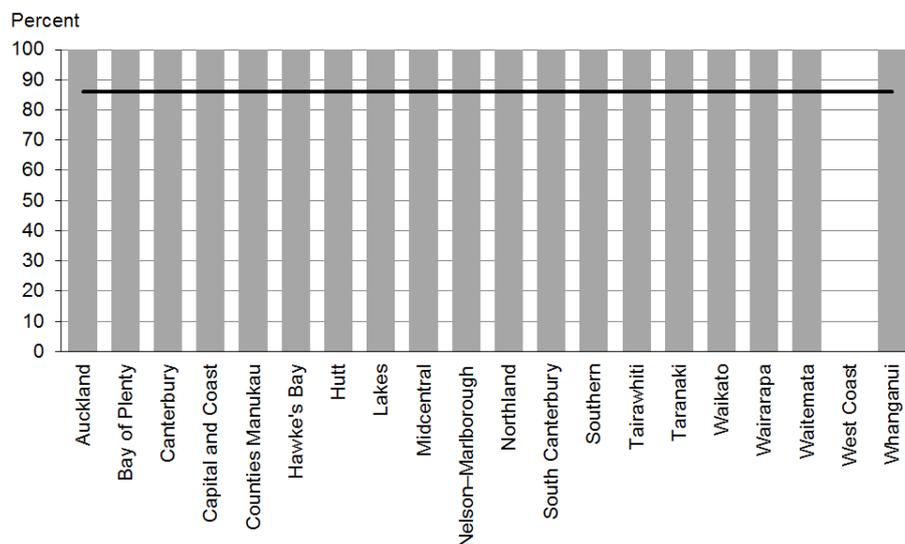
<b>Standard:</b>	WCTO providers deliver services in accordance with best practice (inappropriate variation is reduced)
<b>Indicator:</b>	Children with an untreated hearing problem at the B4 School Check are referred
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range) – including advice given	100%	100%	100%	100%
March 2014 mean (range) – excluding advice given	100%	100%	100%	100%

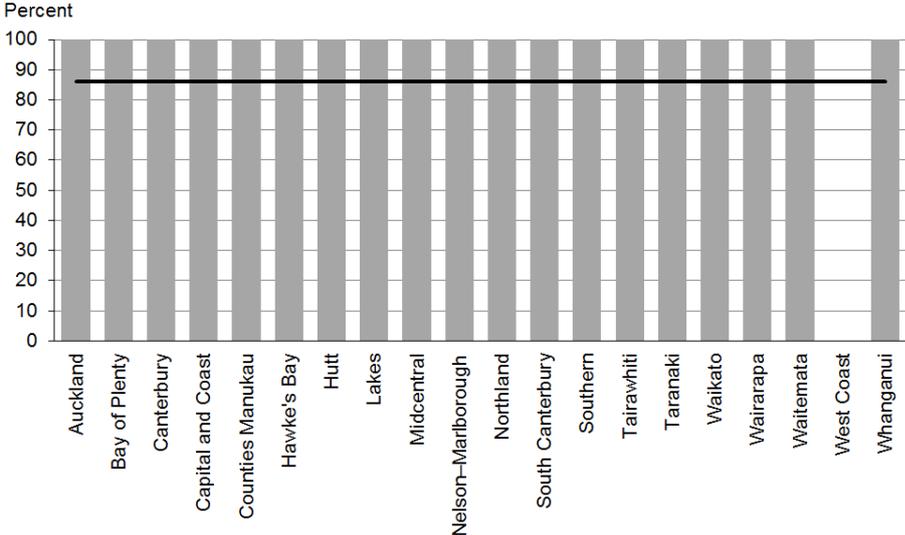
**Figure 91: Hearing problem referred, total New Zealand**



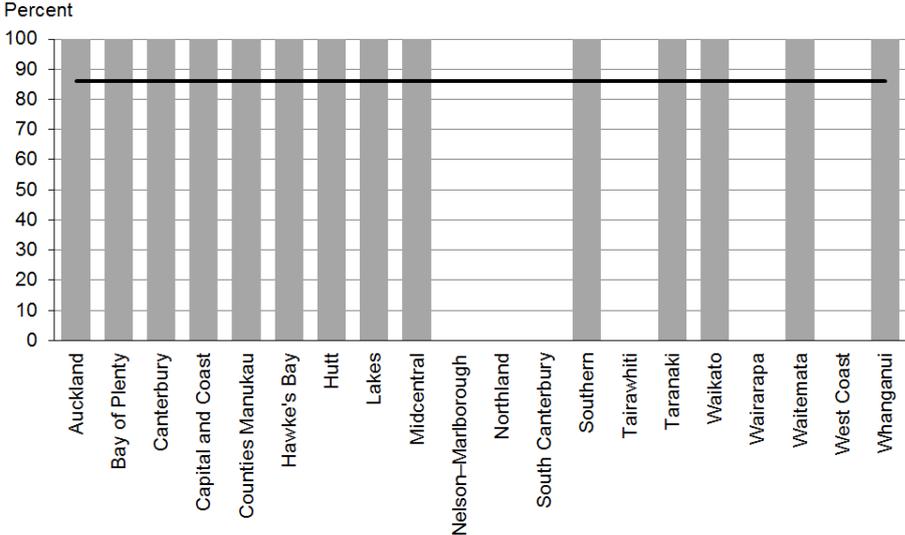
**Figure 92: Hearing problem referred, high deprivation**



**Figure 93: Hearing problem referred, Māori**



**Figure 94: Hearing problem referred, Pacific peoples**



**Data notes**

- No bar on graph = no children with hearing problem for that population.
- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: number of children with a hearing problem referred (excluding advice given) (B4 School Check).
- Denominator: number of children with a hearing problem (excluding those already under care) (B4 School Check).

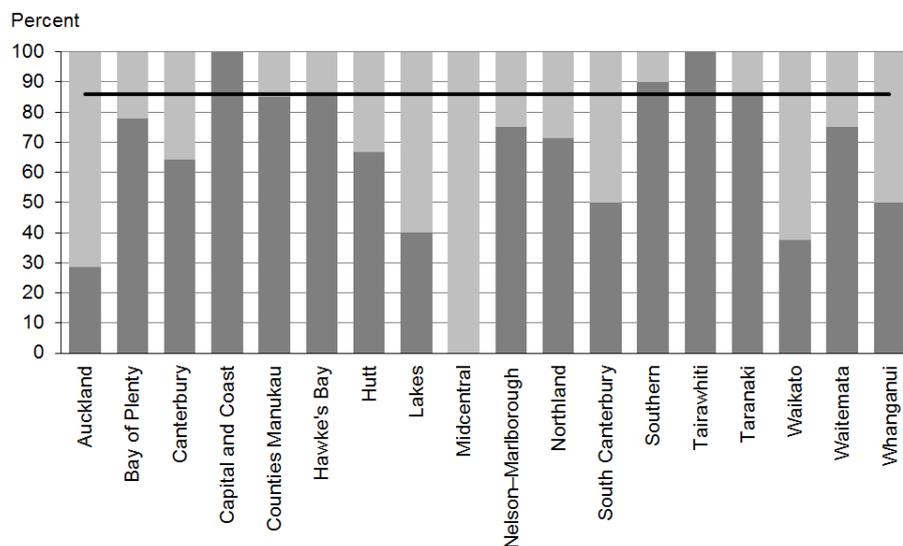
# WCTO Quality Improvement Framework

## Indicator 27

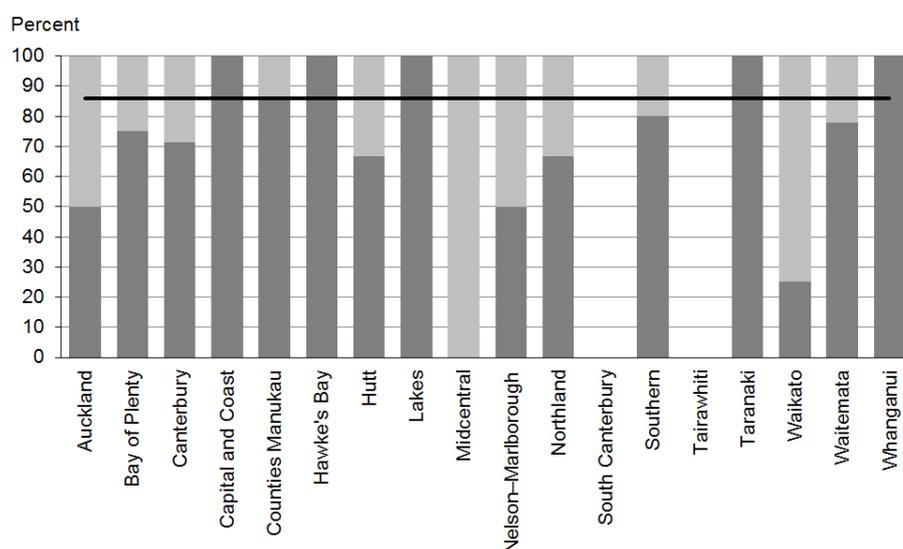
<b>Standard:</b>	WCTO providers deliver services in accordance with best practice (inappropriate variation is reduced)
<b>Indicator:</b>	Children with a BMI greater than the 99.4th percentile at the B4 School Check are referred
<b>Target by December 2014:</b>	86 percent
<b>Target by June 2016:</b>	95 percent

	Total New Zealand	High deprivation	Māori	Pacific peoples
March 2014 mean (range) – including advice given	100%	100%	100%	100%
March 2014 mean (range) – excluding advice given	69% (29–100)	74% (25–100)	59% (14–100)	74% (30–100)

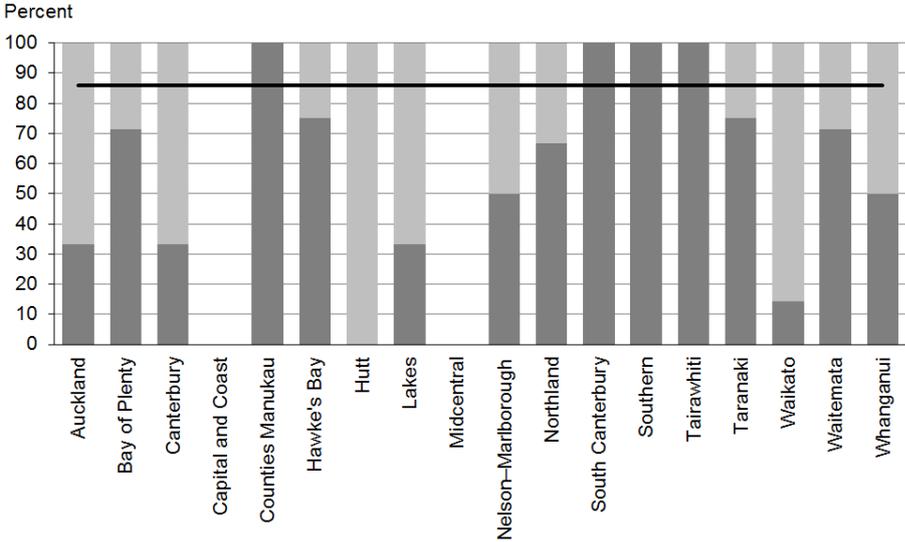
**Figure 95: Children with BMI > 99.4th percentile referred, total New Zealand**



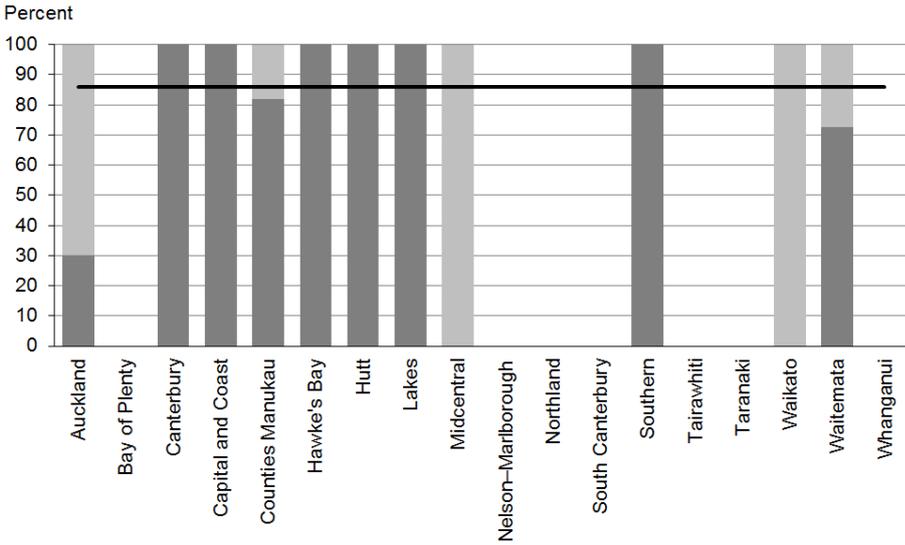
**Figure 96: Children with BMI > 99.4th percentile referred, high deprivation**



**Figure 97: Children with BMI > 99.4th percentile referred, Māori**



**Figure 98: Children with BMI > 99.4th percentile referred, Pacific peoples**



**Data notes**

- Stacked bar shows rate of referral excluding ‘advice given’ and rate of referral including ‘advice given’.
- No bar on graph = no children with BMI > 99.4th for that population.
- Time period: children receiving a B4 School Check between 1 July 2013 and 31 December 2013.
- DHB is DHB of service.
- Numerator: number of children with a BMI greater than the 99.4th percentile referred (source: B4 School Check).
- Denominator: number of children with a BMI greater than the 99.4th percentile (excluding those already under care) (source: B4 School Check).

# Appendix 1: Summary of the WCTO quality indicators

	Indicator	December 2014 target	June 2016 target	
Access	1	Newborns are enrolled with a general practice by two weeks of age <sup>5</sup>	88%	98%
	2	Families/whānau are referred from their LMC to a WCTO provider	88%	98%
	3	Infants receive all WCTO core contacts due in their first year <sup>6</sup>	86%	95%
	4	Four-year-olds receive a B4 School Check	90%	90%
	5	Children are enrolled with child oral health services	86%	95%
	6	Immunisations are up to date by eight months	95%	95%
	7	Children participate in early childhood education	98%	98%
	8	Children under six have access to free primary care	98%	100%
	9	Children under six have access to free after-hours primary care	98%	100%
	10	Children are seen promptly following referral to specialist services	100% in 5 months	100% in 4 months
Outcomes	11	Infants are exclusively or fully breastfed at two weeks	72%	80%
	12	Infants are exclusively or fully breastfed at six weeks (discharge from LMC)	68%	75%
	13	Infants are exclusively or fully breastfed at three months of age	54%	60%
	14	Infants are receiving breast milk at six months (exclusively, fully or partially breastfed)	59%	65%
	15	Children are a healthy weight at four years	68%	75%
	16	Children are caries free at five years	65%	65%
	17	The burden of dental decay among children with one or more decayed, missing and filled teeth (dmft) is minimised	4.4 DMFT	4 DMFT
	18	Child mental health is supported (children's SDQ scores are in the normal range at the B4 School Check)	86%	95%
	19	Mothers are smokefree at two weeks postnatal	86%	95%
	20	Children live in smokefree homes (age four years)	90%	100%
Quality	21	B4 School Checks are started before children are 4½	81%	90%
	22	Children with an abnormal SDQ-P score at the B4 School Check are referred to specialist services	86%	95%
	23	Children with a PEDS pathway A at the B4 School Check are referred to specialist services	86%	95%
	24	Children with an LTL score of 2–6 at the B4 School Check are referred to specialist services	86%	95%
	25	Children with an untreated vision problem at the B4 School Check are referred to specialist services	86%	95%
	26	Children with an untreated hearing problem at the B4 School Check are referred to specialist services	86%	95%
	27	Children with a BMI greater than the 99.4th percentile at the B4 School Check are referred to a GP or specialist services	86%	95%

<sup>5</sup> Data to monitor this indicator is not yet available. PHO enrolment at three months will be used as a de facto indicator in the interim.

<sup>6</sup> Data for all WCTO providers is not yet available, and so data from Plunket has been used in the interim for quality indicators 3, 11 and 12.

# Appendix 2: Membership of the WCTO Quality Improvement Framework Expert Advisory Group<sup>7</sup>

Name	Role(s)	Representing
Helen Connors	WCTO Nurse and Clinical Advisor – Plunket	Royal New Zealand Plunket Society
Dave Graham	Paediatrician – Waikato DHB, Chair of Midland Child Health Action Group and Member of the Paediatric Society of New Zealand	Paediatric Society of New Zealand
Christine Griffiths	Lead Maternity Carer, Lecturer Otago Polytechnic and Expert Advisor to the New Zealand College of Midwives	New Zealand College of Midwives
Laurie Mahoney	Registered Nurse and Senior Lecturer, Otago Polytechnic	College of Primary Care Nurses, New Zealand Nurses Organisation
Tui Makoare-lefata	WCTO Nurse/Team Leader – Ngati Whatua o Orakei and Tamariki Ora provider national representative	Tamariki Ora providers
Gail Tihore	Vision and Hearing Technician – Hutt Valley DHB	VHT Society
Pat Tuohy	Paediatrician – Hutt Valley DHB and Chief Advisor Child and Youth Health	Ministry of Health
Nikki Turner	General Practitioner, Associate Professor Auckland University and Director of CONECTUS and the Immunisation Advisory Centre	New Zealand College of General Practitioners
Russell Wills	Paediatrician – Hawke's Bay DHB and Children's Commissioner	Office of the Children's Commissioner
Mollie Wilson	WCTO Nurse and CEO of the Paediatric Society of New Zealand	Paediatric Society of New Zealand

<sup>7</sup> Membership as at March 2014. The Ministry would like to thank previous members of the EAG for their work.