



The Determinants of Child and Youth  
Health in Capital and Coast  
Overview of 2009  
Report

## Overview of Reporting Series

- Year 1 (2008) Health Status
- Year 2 (2009) Health Determinants
- Year 3 (2010) Chronic Conditions/Disability
  
- Each Year, 2 Issues Explored in More Detail  
2009: Early Intervention Programs & Shifting Services from Secondary to Primary Care
- Evidence Based Review Tables for Each Indicator
- Annual DHB Workshop in May

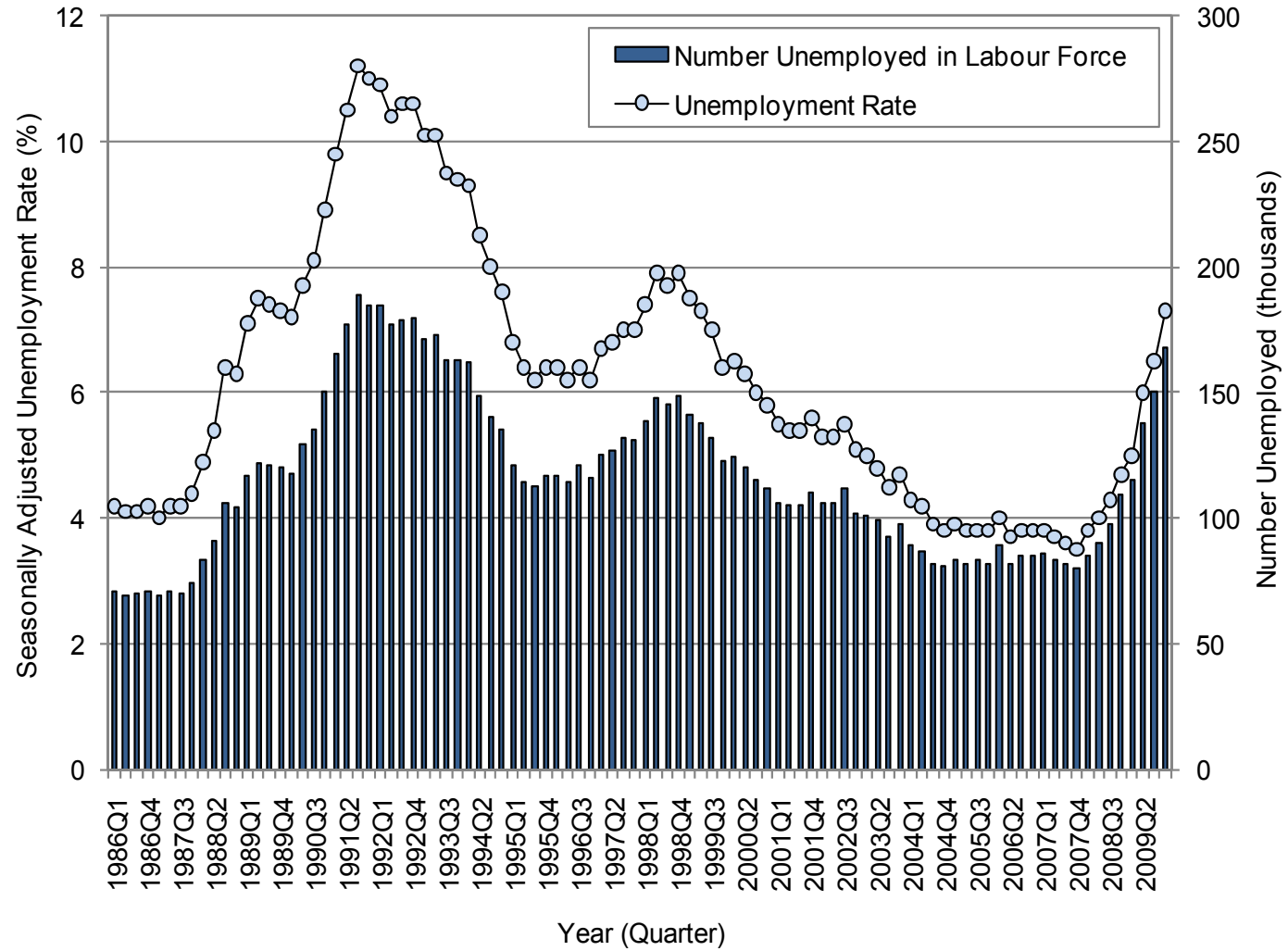




# Children's Social Health Monitor



# Seasonally Adjusted Unemployment Rates, New Zealand 1986 (Quarter 1) - 2009 (Quarter 4)



Source: Statistics NZ

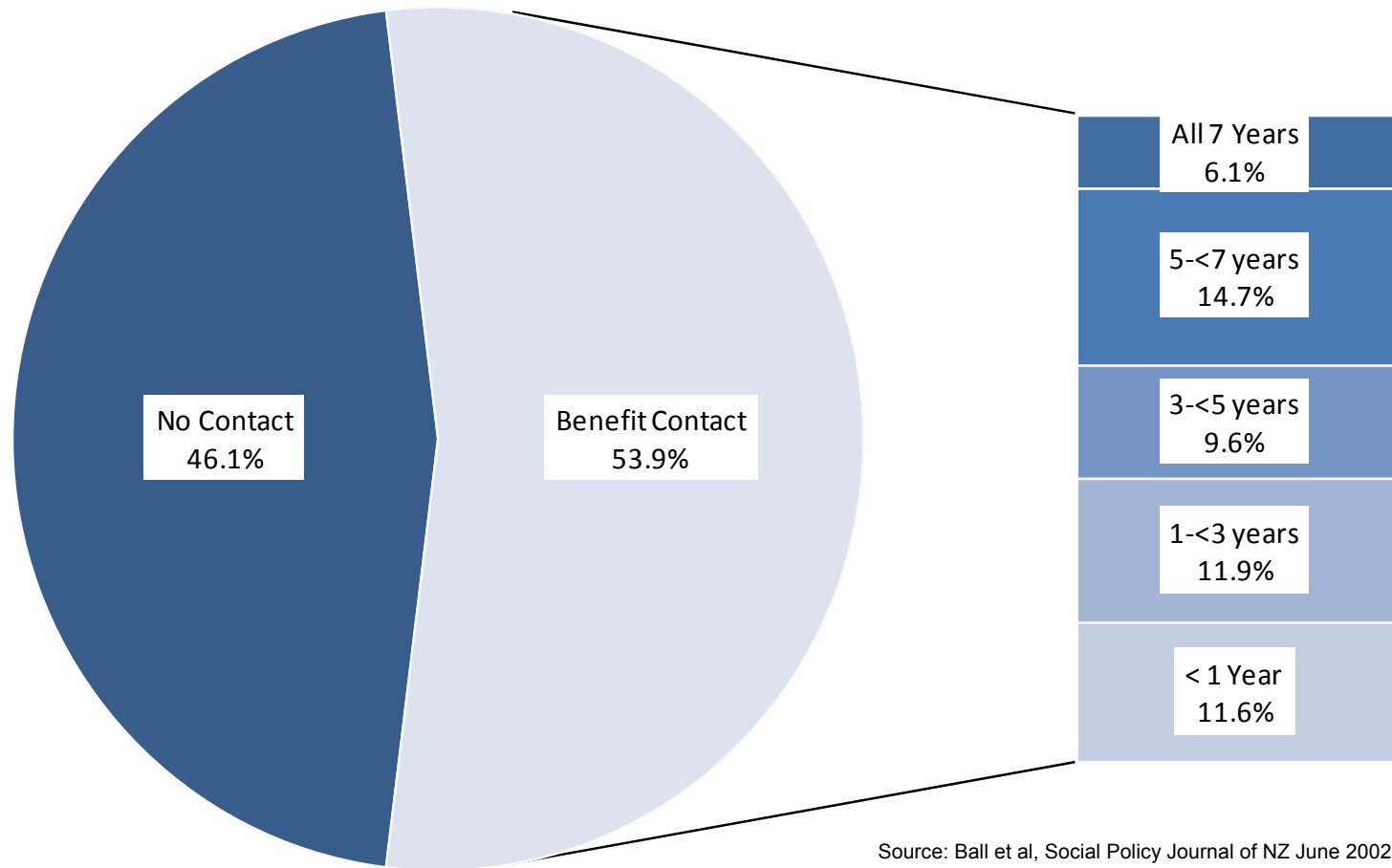


## Number of Children Aged 0-18 Years Who Were Reliant on a Benefit Recipient by Benefit Type, for Service Centres in the Capital and Coast Region, April 2007- 2009

Year	DPB		Unemployment		Sickness		Invalid's		Other Benefits		Total
	Number	%*	Number	%*	Number	%*	Number	%*	Number	%*	Number
2007	7,128	74.1	536	5.6	503	5.2	620	6.4	837	8.7	9,624
2008	6,766	74.1	339	3.7	501	5.5	611	6.7	917	10.0	9,134
2009	7,107	72.2	650	6.6	496	5.0	607	6.2	990	10.1	9,850

Source: Ministry of Social Development; Service Centres Include Johnsonville, Kapiti, Kilbirnie, Newtown, Porirua, and Wellington; \*Note: % refers to % of children relying on benefit recipients, rather than % of all children;

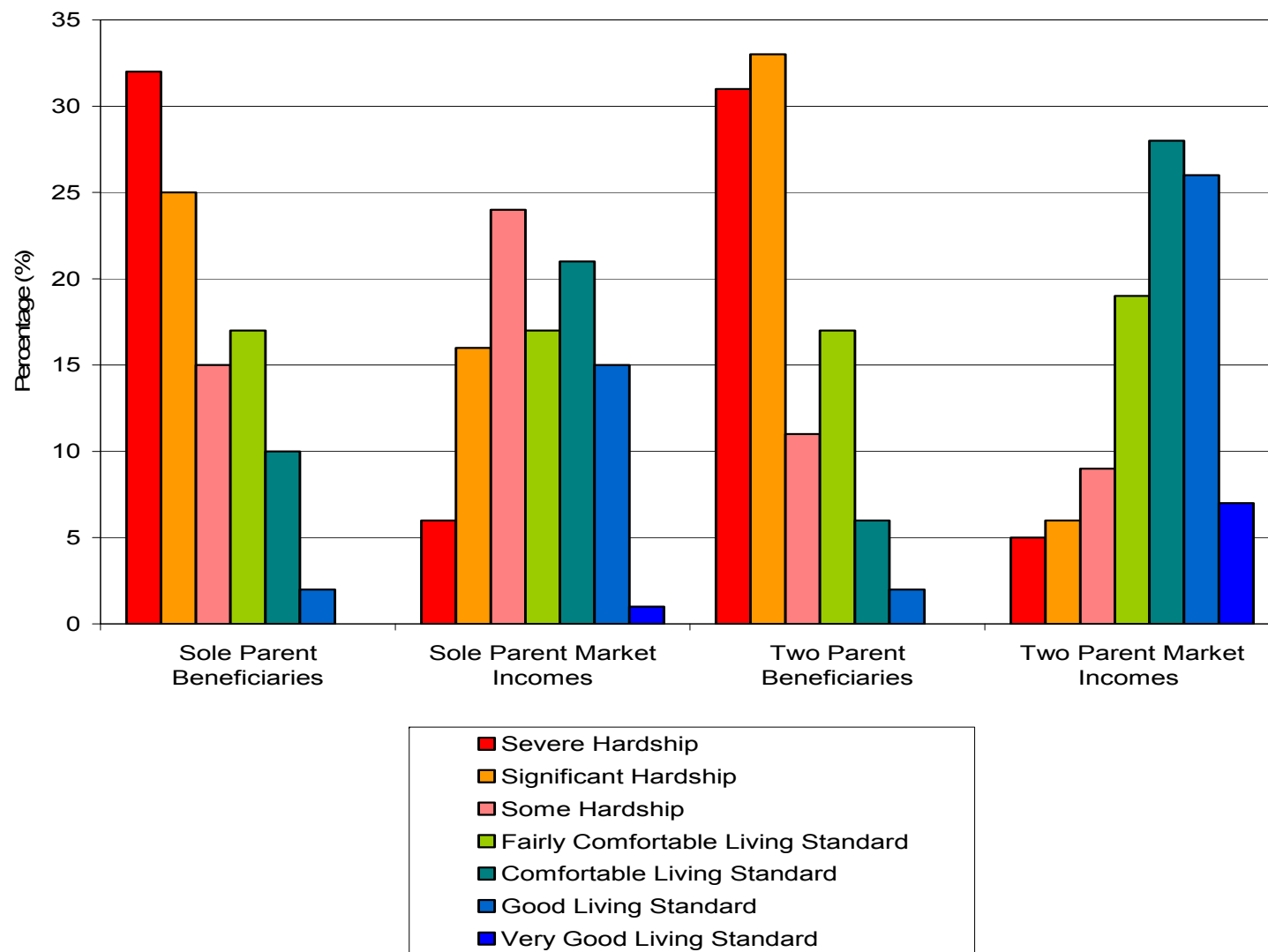
# Total Duration on a Benefit by Age Seven for New Zealand's 1993 Birth Cohort



Source: Ball et al, Social Policy Journal of NZ June 2002



# Living Standards Distribution of Families with Dependent Children by Family Type and Income Source, New Zealand Living Standards Survey 2004



## Constraints on Children's Consumption by their Family's Standard of Living, New Zealand Living Standards Survey 2004

	Severe Hardship (Level 1)	Some Hardship (Level 3)	Good / Very Good Living Standards (Levels 6 and 7)
Items Not Obtained / Not Participated in Because of Cost (%)			
Suitable Wet Weather Clothing for Each Child	51	13	2
A Pair of Shoes in Good Condition	35	5	0
Child's Bike	45	10	1
Play Station or Xbox	37	10	1
Personal Computer	55	23	1
Internet Access'	51	23	0
Pay for Childcare	35	15	2
Have Child's Friends Over for a Meal	38	6	0
Have Enough Room for Child's Friends to Stay the Night	35	9	0
Have Child's Friends to a Birthday Party	34	11	1
Items of Consumption Out Back on (a Little or a Lot) Because of Cost (%)			
Not Gone on School Outings	66	26	0
Not Brought School Books / Supplies	49	19	0
Not Brought Books for Home	61	33	1
Postponed Child's Visit to Doctor Because of Cost	46	20	1
Postponed Child's Visit to Dentist Because of Cost	36	20	1
Child Went Without Glasses	15	10	0
Child Went Without Cultural Lessons	55	40	4
Child's Involvement in Sports Limited	66	40	1
Child Wore Poorly Fitting Clothes or Shoes	65	33	1
Children Share a Bed	40	7	0
Limited Space for Child to Study or Play	72	34	1



## Hospital Admissions for Medical Conditions with a Social Gradient in Children 0-14 Years, Capital and Coast 2004-2008

Diagnosis	Capital and Coast DHB			
	Number: Total 2004- 2008	Number: Annual Average	Rate per 1,000	% of Total
<b>Medical Conditions</b>				
Gastroenteritis	1,062	212.4	4.09	14.11
Asthma	1,000	200.0	3.85	13.29
Bronchiolitis	933	186.6	3.59	12.40
Skin Infections	759	151.8	2.92	10.08
Viral Infection of Unspecified Site	703	140.6	2.71	9.34
Acute Upper Respiratory Infections	683	136.6	2.63	9.07
Bacterial / Non-Viral Pneumonia	588	117.6	2.27	7.81
Viral Pneumonia	299	59.8	1.15	3.97
Urinary Tract Infection	285	57.0	1.10	3.79
Epilepsy / Status Epilepticus	251	50.2	0.97	3.33
Croup / Laryngitis / Tracheitis / Epiglottitis	207	41.4	0.80	2.75
Dermatitis and Eczema	202	40.4	0.78	2.68
Febrile Convulsions	150	30.0	0.58	1.99
Otitis Media	91	18.2	0.35	1.21
Inguinal Hernia	73	14.6	0.28	0.97
Bronchiectasis	56	11.2	0.22	0.74
Osteomyelitis	43	8.6	0.17	0.57
Rheumatic Fever / Heart Disease	41	8.2	0.16	0.54
Vaccine Preventable Diseases	26	5.2	0.10	0.35
Meningococcal Disease	24	4.8	0.09	0.32
Viral / Other / NOS Meningitis	19	3.8	0.07	0.25
Nutritional Deficiencies / Anaemias	16	3.2	0.06	0.21
Bacterial Meningitis	12	2.4	0.05	0.16
Tuberculosis	<5	s	s	s
<b>Total</b>	<b>7,527</b>	<b>1505.4</b>	<b>29.00</b>	<b>100.00</b>



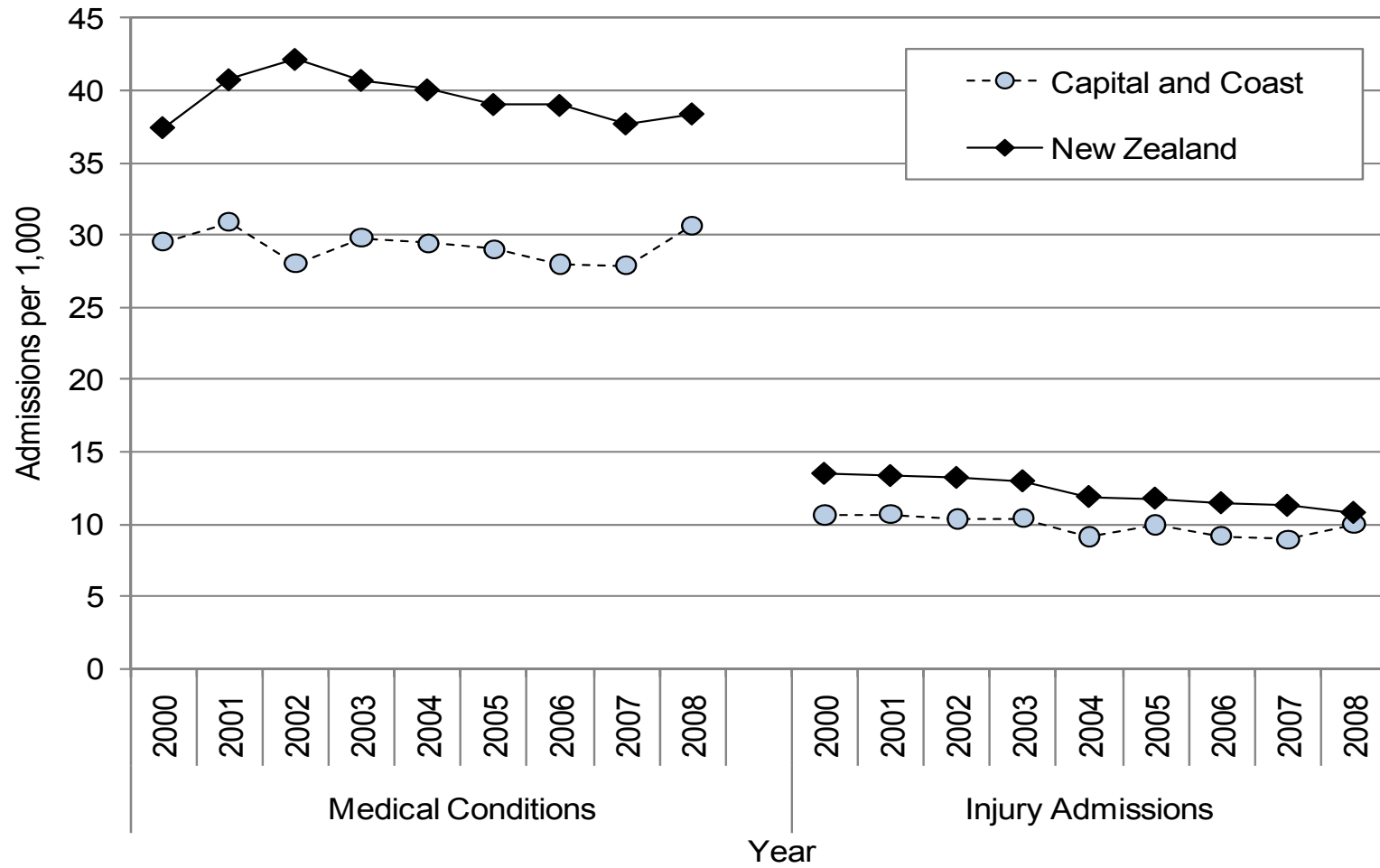
## Hospital Admissions for Injuries with a Social Gradient in Children Aged 0-14 Years, Capital and Coast 2004-2008

Diagnosis	Capital and Coast DHB			
	Number: Total 2004- 2008	Number: Annual Average	Rate per 1,000	% of Total
<b>Injury Admissions</b>				
Falls	1,286	257.2	4.95	52.38
Mechanical Forces: Inanimate	737	147.4	2.84	30.02
Transport: Cyclist	125	25.0	0.48	5.09
Accidental Poisoning	97	19.4	0.37	3.95
Electricity / Fire / Burns	81	16.2	0.31	3.30
Mechanical Forces: Animate	47	9.4	0.18	1.91
Transport: Pedestrian	41	8.2	0.16	1.67
Transport: Vehicle Occupant	35	7.0	0.13	1.43
Drowning / Submersion	6	1.2	0.02	0.24
<b>Total</b>	<b>2,455</b>	<b>491.0</b>	<b>9.46</b>	<b>100.00</b>



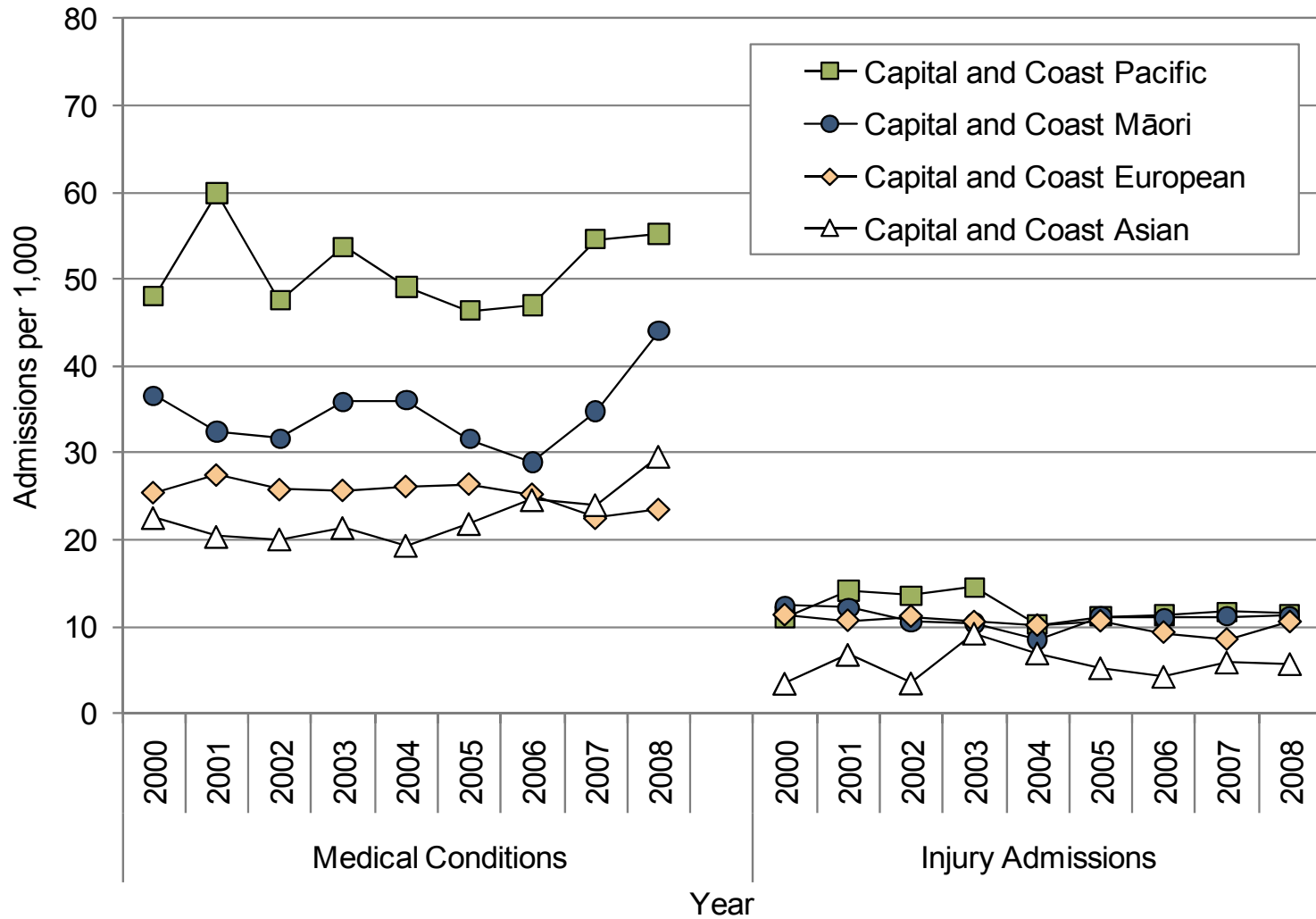


## Hospital Admissions for Conditions with a Social Gradient in Children Aged 0-14 Years, Capital and Coast vs. New Zealand 2000-2008





## Hospital Admissions for Conditions with a Social Gradient in Children Aged 0-14 Years by Ethnicity, Capital and Coast 2000-2008





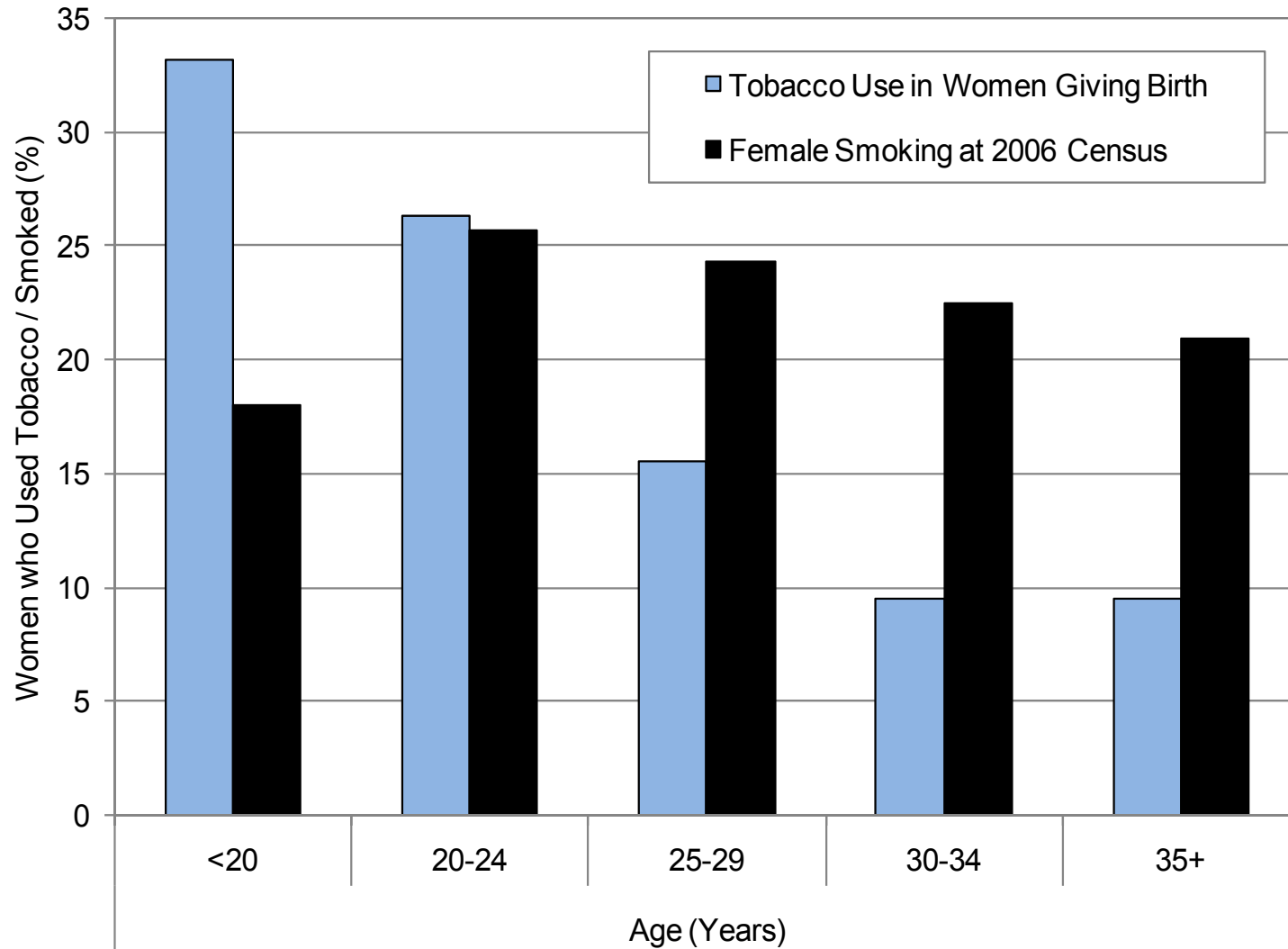
# Tobacco Use During Pregnancy

## Tobacco Use in Women Giving Birth

- Women admitted to hospital (NMDS) for childbirth with tobacco use ICD-10 F17 (Mental and Behavioural Disorders due to Tobacco), or ICD-10 Z720 (Tobacco Use Current) listed in first 15 diagnoses
- NMDS potentially undercounts tobacco use in pregnancy as relies on smoking status being documented by staff and picked up by coders (large DHB variations in this process). Only relates to hospital births, and trimester of tobacco use not clear
- Nevertheless, provides some useful information on distribution of tobacco use during pregnancy

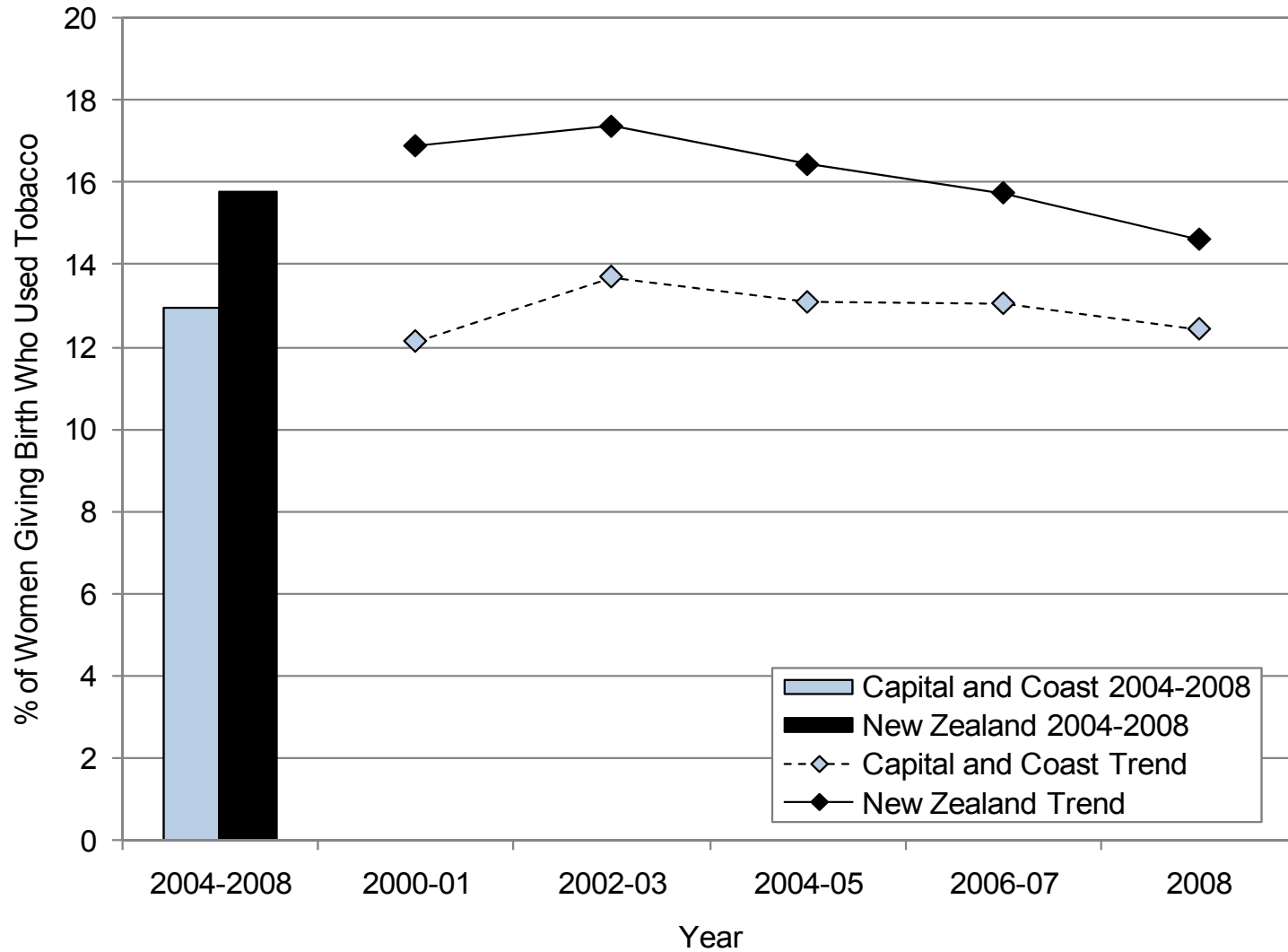


## Proportion of New Zealand Women Giving Birth During 2004-2008 Who Used Tobacco vs. Proportion of Female Smoking at the 2006 Census, by Age

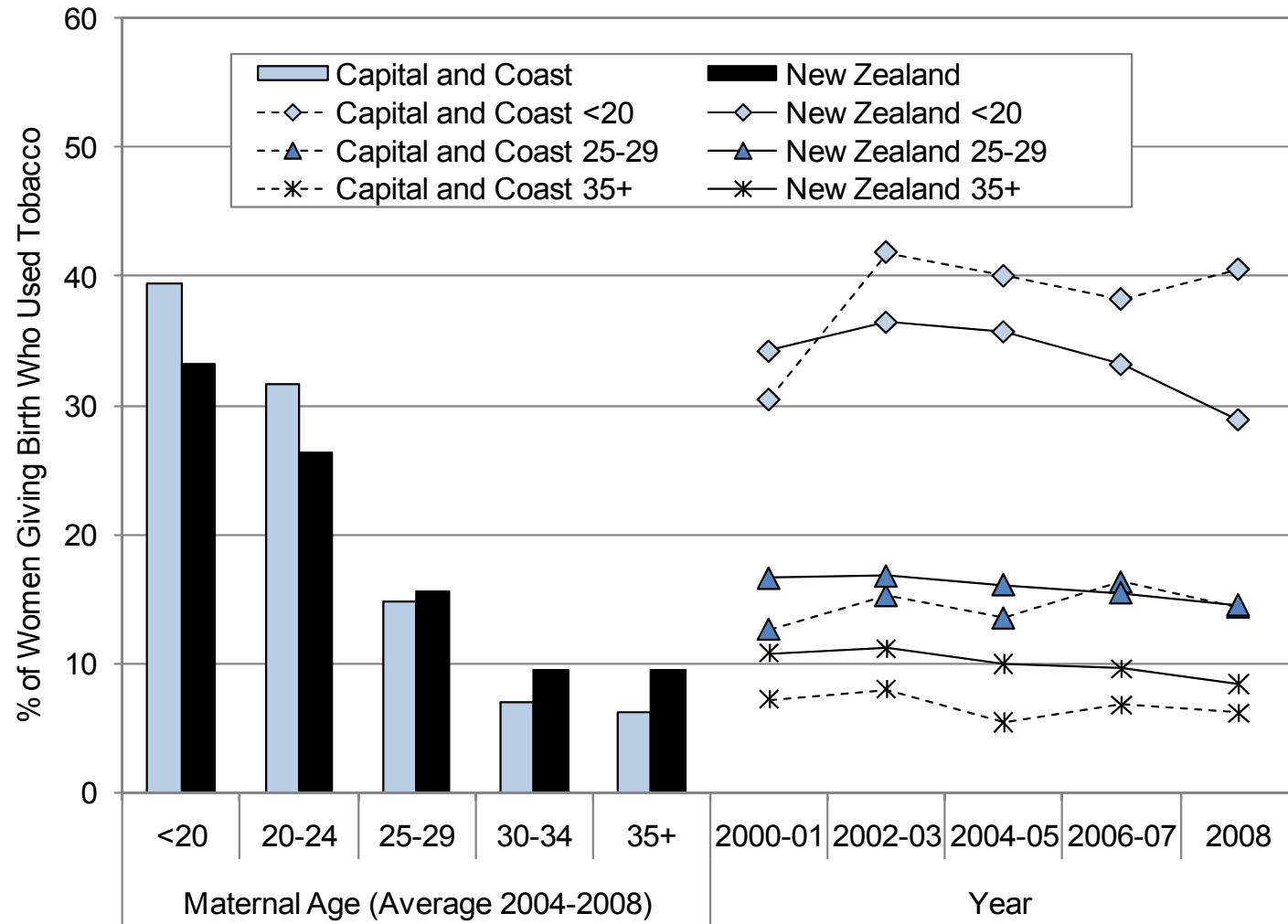




## Proportion of Women Giving Birth Who Used Tobacco, Capital and Coast vs. New Zealand 2000-2008

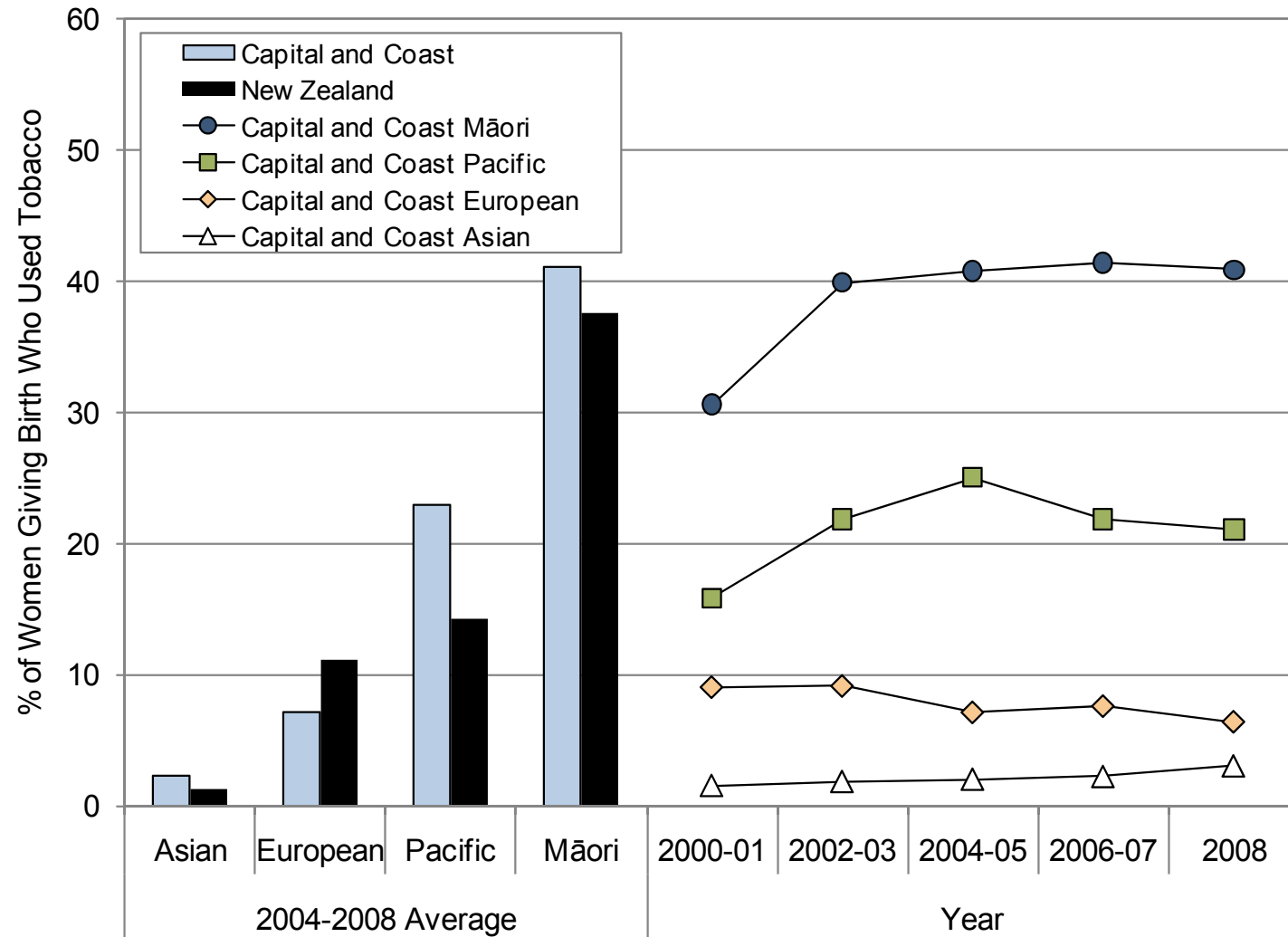


## Proportion of Women Giving Birth Who Used Tobacco by Maternal Age, Capital and Coast vs. New Zealand 2000-2008



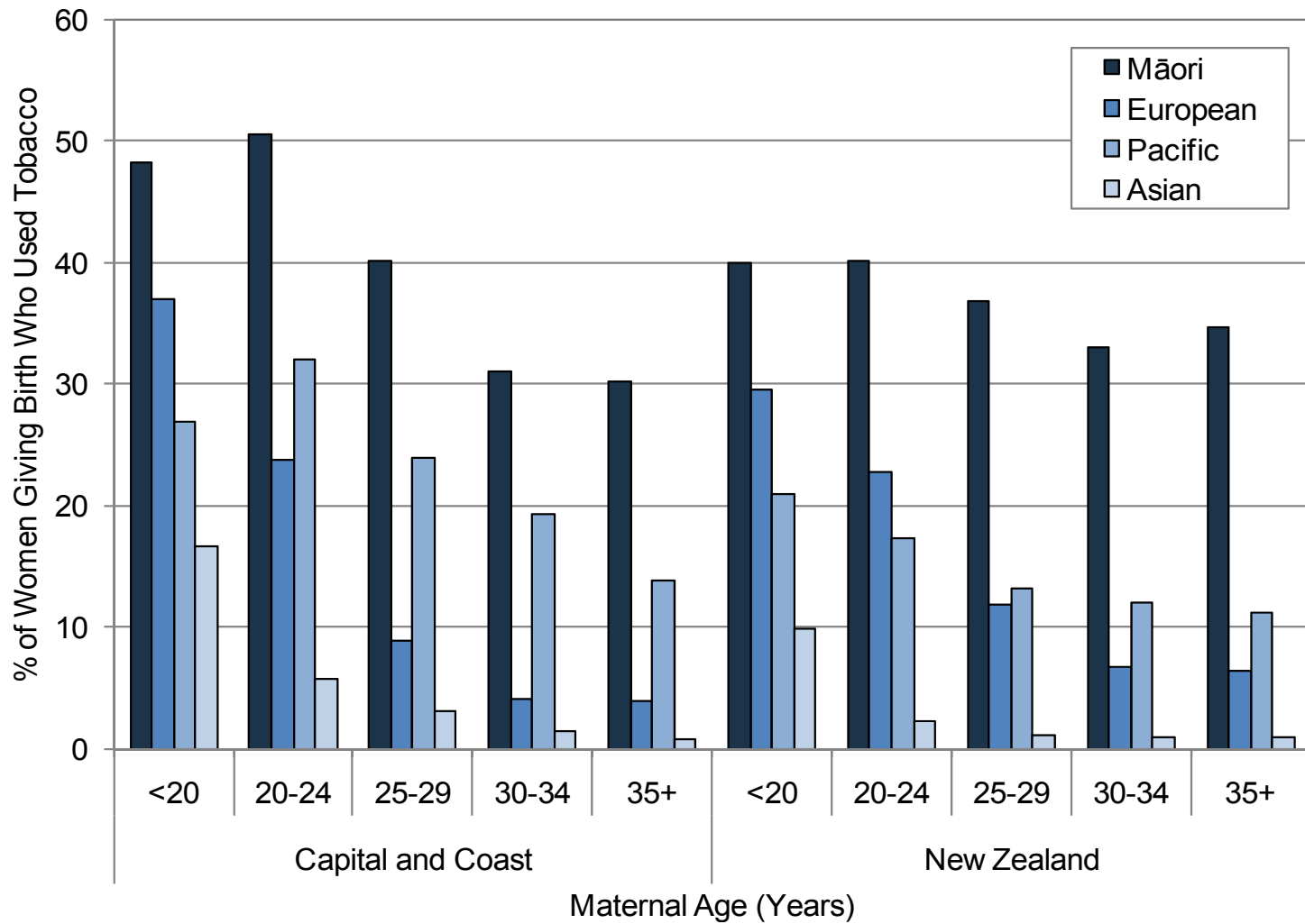


## Proportion of Women Giving Birth Who Used Tobacco by Ethnicity, Capital and Coast vs. New Zealand 2000-2008

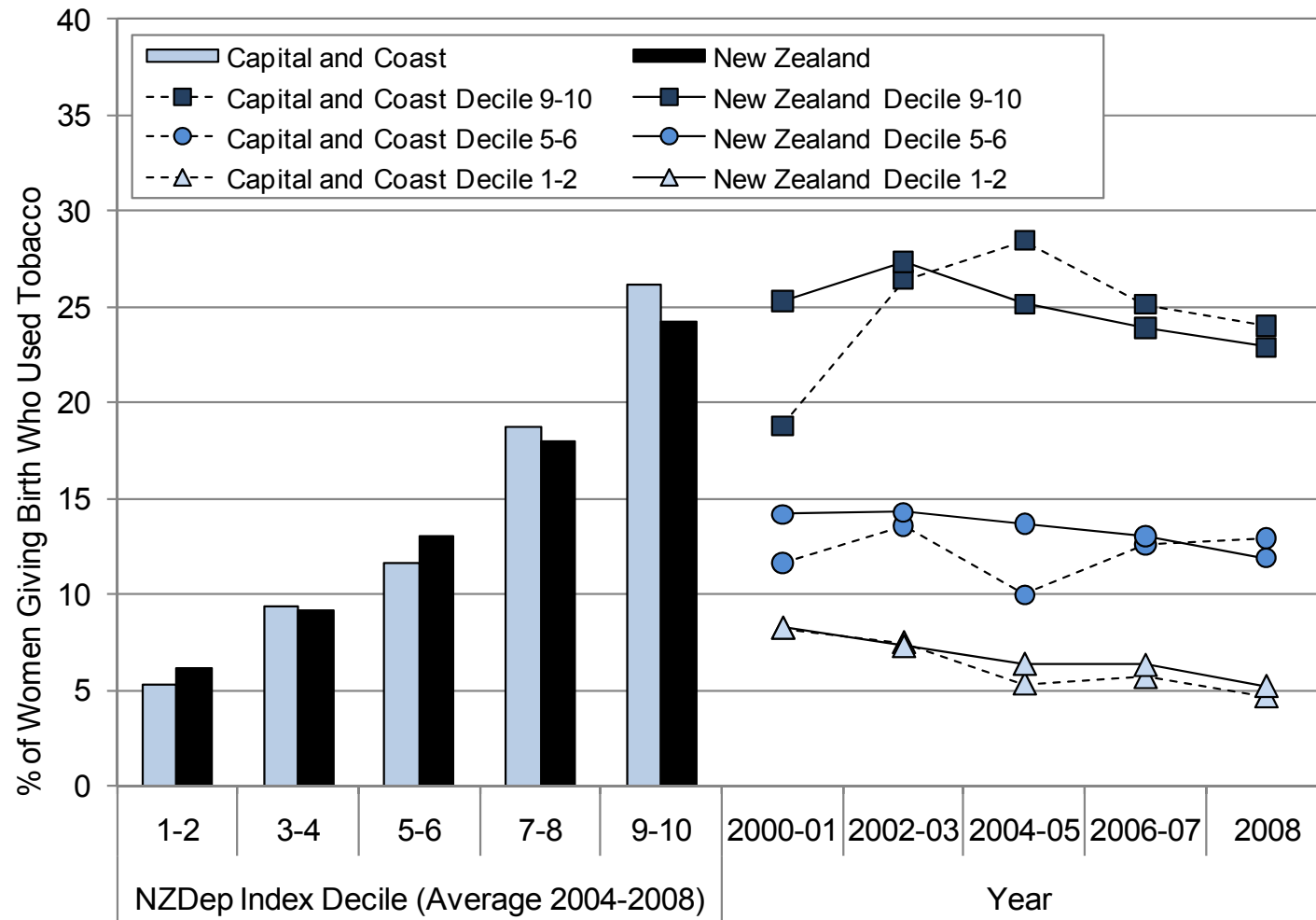




## Proportion of Women Giving Birth Who Used Tobacco by Maternal Age and Ethnicity, Capital and Coast vs. New Zealand 2004-2008



## Proportion of Women Giving Birth Who Used Tobacco by NZ Deprivation Index Decile, Capital and Coast vs. New Zealand 2000-2008





# Children and Young People Accessing Mental Health Services

# MHINC: Methods and Cautions

- MHINC: Publicly funded secondary mental health, alcohol and drug services. Includes inpatient, outpatient and community care. Doesn't include paediatric outpatients (i.e. children seeing paediatrician for behavioural / emotional problems). Thus may significantly underestimate prevalence of mental health issues (e.g. autism, ADHD) in children.
- MHINC records principal, secondary, provisional diagnoses at each contact (in large number diagnosis missing, or coded mental health assessment). In report, individuals assigned diagnosis, if ever received diagnosis at any point in the reference period (i.e. number = number individuals accessing services in 2005-07 who had ever received diagnosis; rate = individuals with diagnosis ÷ number in population at mid-point of period (i.e. 2006)). Contacts and bed-nights ascribed to individuals with diagnosis, irrespective of reason person sought care (e.g. contacts for ADHD = no. of contacts for children ever diagnosed with ADHD (including those where the consultation related to another diagnoses).
- Where individual resided in multiple DHBs, included in data for each DHB in which they resided. As a result, total number of individuals with a diagnosis, when summed across DHBs, exceeds total number with diagnosis nationally. As a consequence, regional rates (particularly for conditions with high mobility) may appear artificially higher than the New Zealand average.



## Number of Children Aged 0-14 Years Accessing Mental Health Services with Selected Diagnoses, Capital and Coast vs. New Zealand 2005-2007

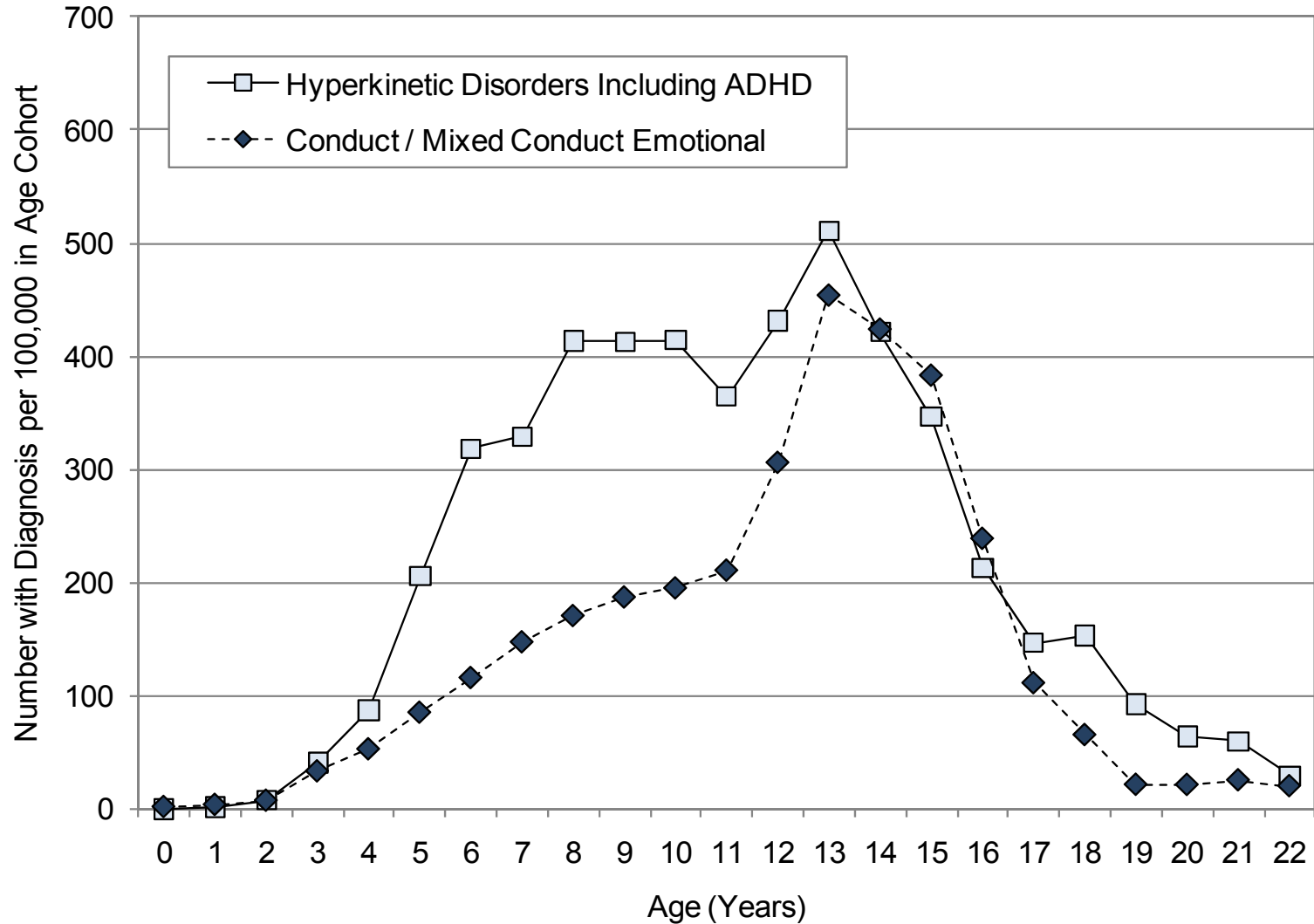
Diagnosis	Capital and Coast DHB		New Zealand	
	No. of Individuals with Diagnosis	Rate per 100,000	No. of Individuals with Diagnosis	Rate per 100,000
Hyperkinetic Disorders Including ADHD	221	425.7	2,349	270.8
Conduct / Mixed Conduct Emotional Disorders	118	227.3	1,439	165.9
Pervasive Developmental Disorders (Incl. Autism)	68	131.0	856	98.7
Learning Disorder / Development Scholastic Skills	50	96.3	475	54.8
Separation Anxiety Disorder	39	75.1	300	34.6
Reactive Attachment Disorder	17	32.8	268	30.9
Mental Retardation	19	36.6	255	29.4

Note: DHB numbers include anyone resident in DHB at any time during 2005-2007 (irrespective of where they subsequently accessed services). This approach may increase DHB rates (vs. NZ average) in situations where mobility between DHBs is high (see Methods section). As an individual may have more than one mental health diagnosis, columns do NOT sum to 100%; \*Table does not include all children with mental health diagnoses accessing services in the region, but rather provides an overview of the most common diagnoses only.





# Children and Young People Accessing Mental Health Services with Hyperkinetic or Conduct Disorders by Age, New Zealand 2005-2007





## Access to Mental Health Services for Children 0-14 Years with a Hyperkinetic Disorder (Including Attention Deficit Hyperactivity Disorder), Capital and Coast vs. New Zealand 2005-2007

DHB	No. of Individuals with Diagnosis	No. of Annual Contacts per Individual	No. of Annual Bed Nights per Individual	Bed Night to Contact Ratio	Contact to Bed Night Ratio
Capital and Coast	221	16.0	0.1	0.00	230.09
New Zealand	2,349	9.8	0.1	0.01	90.82

No of Individuals= total number of individuals with diagnosis accessing services during 2005-2007; No. of Annual Contacts per Individual= number of contacts each year (averaged over 2005-2007) for individuals with diagnosis ÷ number of individuals with diagnosis; No of. Annual Bed Nights per Individual= number of Bed Nights each year (averaged over 2005-2007) for individuals with diagnosis ÷ number of individuals with diagnosis; Bed Night to Contact Ratio = number of Bed Nights ÷ number of Contacts; Contact to Bed Night Ratio = Number of Contacts ÷ Number of Bed Nights. Note: DHB numbers include anyone resident in DHB at any time during 2005-2007 with diagnosis (irrespective of where they may have subsequently accessed services (see Methods section for more detailed explanation).

## Access to Mental Health Services for Children 0-14 Years with a Hyperkinetic Disorder (Including ADHD) by NZDep Index Decile, Ethnicity and Gender, New Zealand 2005-2007



Variable	Individuals				Contacts				Inpatient Bed Nights			
	Total Number	Rate	RR	95% CI	Annual Number	Rate	RR	95% CI	Annual Number	Rate	RR	95% CI
	NZ Deprivation Index Decile				NZ Deprivation Index Decile				NZ Deprivation Index Decile			
Decile 1-2	204	116	1.00		1,821	1,036	1.00		84	48	1.00	
Decile 3-4	345	209	1.80	1.52 - 2.14	3,203	1,944	1.88	1.82 - 1.94	25	15	0.32	0.25 - 0.42
Decile 5-6	587	369	3.18	2.71 - 3.73	5,923	3,724	3.59	3.49 - 3.70	29	18	0.38	0.30 - 0.49
Decile 7-8	681	419	3.61	3.09 - 4.22	7,286	4,486	4.33	4.21 - 4.46	48	29	0.62	0.50 - 0.76
Decile 9-10	530	258	2.22	1.89 - 2.61	4,800	2,337	2.26	2.19 - 2.32	68	33	0.70	0.58 - 0.84
	Ethnicity				Ethnicity				Ethnicity			
Asian	12	17	0.05	0.03 - 0.09	128	182	0.05	0.05 - 0.06	<5	s	s	s
European	1691	353	1.00		16,596	3,462	1.00		196	41	1.00	
Māori	476	238	0.68	0.61 - 0.75	5,043	2,522	0.73	0.72 - 0.74	44	22	0.54	0.45 - 0.65
Pacific	54	71	0.20	0.15 - 0.27	347	460	0.13	0.12 - 0.14	0	s	s	s
	Gender				Gender				Gender			
Female	405	96	1.00		4,539	1,072	1.00		118	28	1.00	
Male	1944	438	4.58	4.11 - 5.10	18,500	4,166	3.89	3.82 - 3.96	135	30	1.09	0.95 - 1.26



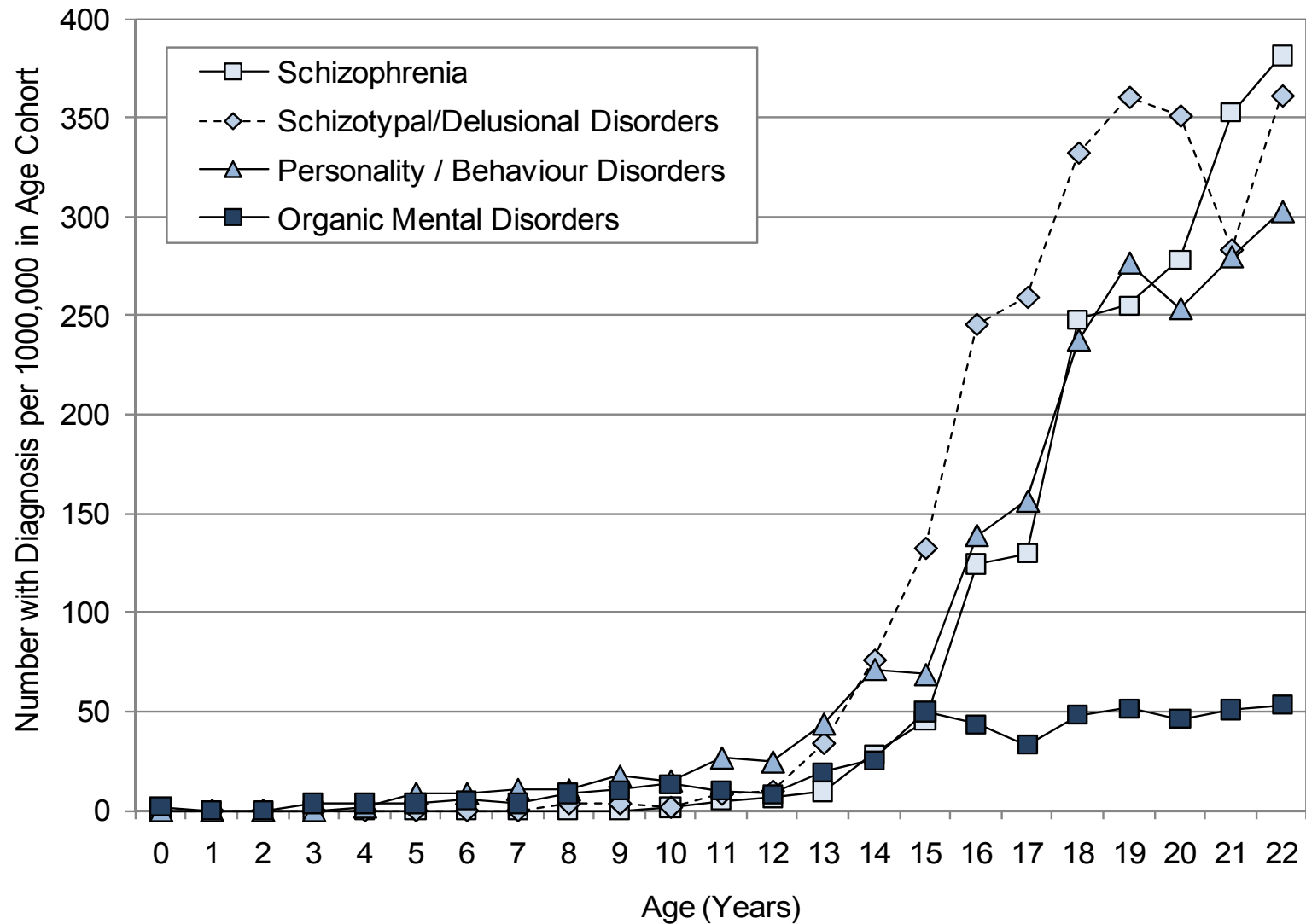
## Number of Young People Aged 15-24 Years Accessing Mental Health Services with Selected Diagnoses, Capital and Coast vs. New Zealand 2005-2007

Diagnosis	Capital and Coast DHB		New Zealand	
	No. of Individuals with Diagnosis	Rate per 100,000	No. of Individuals with Diagnosis	Rate per 100,000
Schizotypal/Delusional Disorders	214	505.2	1,816	317.9
Schizophrenia	181	427.3	1,731	303.1
Personality / Behaviour Disorders	129	304.5	1,349	236.2
Organic Mental Disorders	24	56.7	285	49.9

Note: DHB numbers include anyone resident in DHB at any time during 2005-2007 with diagnosis (irrespective of where they subsequently accessed services. This approach may increase DHB rates (cf. NZ average) in situations where mobility between DHBs is high (see Methods section for more detailed explanation). As an individual can have more than one mental health diagnosis, columns do NOT sum to 100%. \*Table does not include all young people with mental health diagnoses accessing services in the region, but rather provides an overview of the most common diagnoses only.



## Children and Young People Accessing Mental Health Services with Schizophrenia, Schizotypal / Delusional, Personality / Behaviour or Organic Mental Disorders by Age, New Zealand 2005-2007





## Access to Mental Health Services for Young People Aged 15-24 Years with a Diagnosis of Schizophrenia, Capital and Coast vs. New Zealand 2005-2007

DHB	No. of Individuals with Diagnosis	No. of Annual Contacts per Individual	No. of Annual Bed Nights per Individual	Bed Night to Contact Ratio	Contact to Bed Night Ratio
Capital and Coast	181	42.3	35.5	0.84	1.19
New Zealand	1,731	42.1	24.6	0.58	1.71

No of Individuals= total number of individuals with diagnosis accessing services during 2005-2007; No. Annual Contacts per Individual= number of contacts each year (averaged over 2005-2007) for individuals with diagnosis ÷ number of individuals with diagnosis; No. Annual Bed Nights per Individual= number of Bed Nights each year (averaged over 2005-2007) for individuals with diagnosis ÷ number of individuals with diagnosis; Bed Night to Contact Ratio = number of Bed Nights ÷ number of Contacts; Contact to Bed Night Ratio = Number of Contacts ÷ Number of Bed Nights. Note: DHB numbers include anyone resident in DHB at any time during 2005-2007 with diagnosis (irrespective of where they may have subsequently accessed services (see Methods section for more detailed explanation).

## Access to Mental Health Services for Young People Aged 15-24 Years with a Diagnosis of Schizophrenia by NZ Deprivation Index Decile, Ethnicity and Gender, New Zealand 2005-2007

Variable	Individuals				Contacts				Inpatient Bed Nights			
	Total Number	Rate	RR	95% CI	Annual Number	Rate	RR	95% CI	Annual Number	Rate	RR	95% CI
	NZ Deprivation Index Decile				NZ Deprivation Index Decile				NZ Deprivation Index Decile			
Decile 1-2	94	98	1.00		2,894	3,010	1.00		1,133	1,178	1.00	
Decile 3-4	121	118	1.21	0.93 - 1.59	3,985	3,901	1.30	1.26 - 1.33	1,521	1,489	1.26	1.21 - 1.32
Decile 5-6	329	298	3.05	2.42 - 3.83	15,037	13,625	4.53	4.43 - 4.62	7,429	6,732	5.71	5.52 - 5.92
Decile 7-8	582	481	4.92	3.95 - 6.11	27,763	22,930	7.62	7.46 - 7.78	19,130	15,800	13.41	12.97 - 13.87
Decile 9-10	601	426	4.35	3.50 - 5.41	23,235	16,454	5.47	5.35 - 5.58	13,257	9,388	7.97	7.70 - 8.24
	Ethnicity				Ethnicity				Ethnicity			
Asian	70	93	0.58	0.45 - 0.74	2,596	3,452	0.54	0.53 - 0.55	1,615	2,148	0.57	0.56 - 0.59
European	517	161	1.00		20,501	6,392	1.00		12,043	3,755	1.00	
Māori	844	833	5.17	4.63 - 5.77	37,922	37,433	5.86	5.82 - 5.90	23,048	22,751	6.06	6.00 - 6.12
Pacific	172	423	2.62	2.21 - 3.11	8,185	20,109	3.15	3.11 - 3.18	3,540	8,697	2.32	2.27 - 2.36
	Gender				Gender				Gender			
Female	414	146	1.00		20,638	7,276	1.00		11,242	3,963	1.00	
Male	1,316	458	3.14	2.81 - 3.50	52,275	18,181	2.50	2.48 - 2.52	31,352	10,904	2.75	2.72 - 2.78



# In Summary

- Economic Context: Rising Unemployment and  $\uparrow$  in children reliant on benefits during early 2009
- Large number of hospital admissions with social gradient and small number of deaths annually. Future impact of economic downturn difficult to predict over next 3-5 years
- Significant data limitations, but young maternal age, ethnicity and NZDep all influence risk of in-utero tobacco exposure
- Again significant data limitations, but SES and ethnic differences in access to mental health services: Extent to which access reflects need likely to vary by age and diagnosis.

