CHILDREN IN FAMILIES SUPPORTED BY MAIN BENEFITS: AN UPDATE

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Abstract

This paper updates an earlier analysis that examined children's likelihood of being included in a benefit at different ages. We find that up until 2007, children born between 2000 and 2007 were less likely to be included as a dependent child in a main benefit than children born in the 1990s at all ages. The proportion included in a benefit at birth or very soon after fell from around 25% of children born in the 1990s to 20% of children born in 2005 and 2006 and 18% of children born in 2007. Although contact with the benefit system fell, as many as one in five children turning 15 in 2008 are estimated to have been supported by a main benefit for a total of seven or more of their first 14 years of life. An estimated one in ten spent a total of 11 or more of their first 14 years supported by a main benefit.

INTRODUCTION

Between 2001 and 2007 the number of people receiving Unemployment Benefit or Domestic Purposes Benefit in New Zealand decreased substantially. With this decline, the proportion of children aged under 18 whose caregivers are receiving these or other main benefits[2] dropped from an estimated 26% in June 1996 to 19% in June 2007 (Figure 1). In June 2007, 205,000 children aged under 18 were included as a dependent child with a caregiver receiving one of the main benefits (Ministry of Social Development, 2008:31).[3] Eight out of ten of these children were included as the dependent child of a sole parent receiving the Domestic Purposes Benefit. Fewer than one in twenty of the children included in a benefit were with a caregiver receiving an Unemployment Benefit, this proportion having fallen from around one in five in 1999.[4]

In this paper we explore the drop in children's inclusion in the main benefits in more detail, updating an earlier analysis by Ball and Wilson (2002), which examined the prevalence and persistence of low family income for New Zealand children based on indicative measures from benefit data.[5] We look at how the proportion of children in different birth cohorts on a

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[2] The main benefits include the Domestic Purposes Benefit, Emergency Maintenance Allowance, Unemployment Benefit, Training Benefit, Sickness Benefit, Invalid's Benefit, Widow's Benefit and Emergency Benefit.
[3] In June 2008 200,000 children aged under 18 were included as a dependent child with a caregiver receiving one of the main benefits (source: Ministry of Social Development Information and Analysis Platform). At the time of writing, the population estimates required to calculate the June 2008 proportion of children whose caregivers were receiving main benefits were not available.
[4] Source: Ministry of Social Development, Information and Analysis Platform.
[5] See Barrett et al. 2003 for a multivariate analysis of factors associated with the length of time children spent included on a benefit.

benefit at given ages has changed. We also examine changes in the total time children in successive birth cohorts have been supported by the main benefits in their early years.

Figure 1 Estimated percentage of children aged under 18 included in a main benefit, as at June[6]
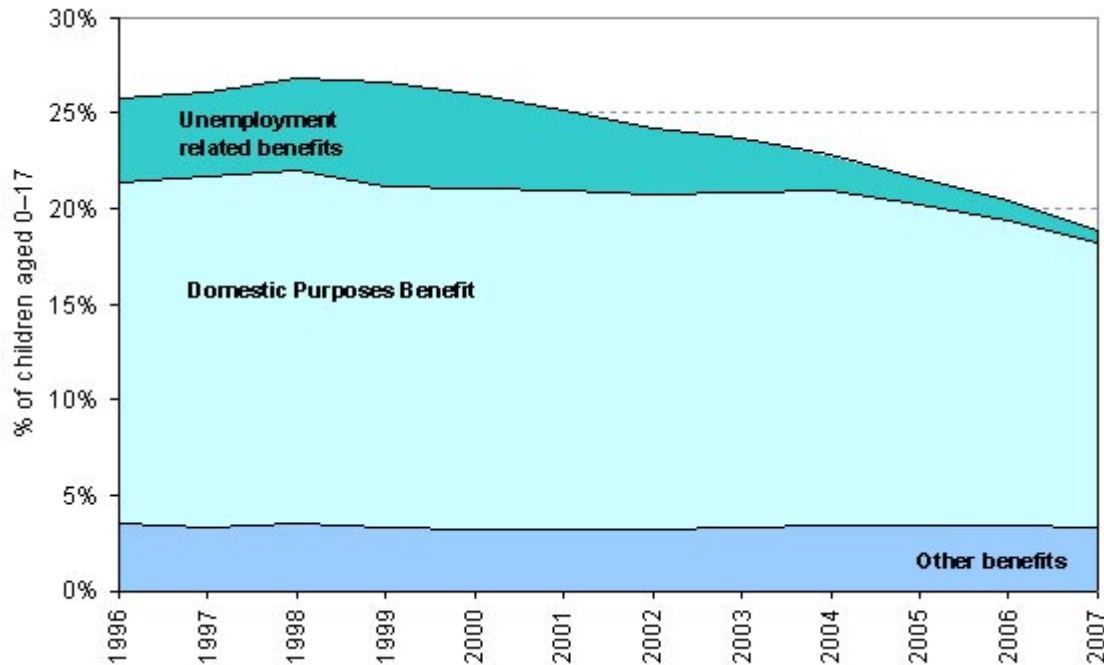
Source: Ministry of Social Development (MSD) Information and Analysis Platform; Statistics New Zealand (SNZ), national population estimates by single year of age, June quarters 1996–2007.

DATA AND METHOD

The analysis is based on the Ministry of Social Development's Benefit Dynamics Dataset (BDD), a research data set assembled from historical benefit administration data.[7] The BDD can be used to create individual benefit histories for each child ever included in a main benefit from 1993 onwards. The BDD has a number of strengths, including:

- *a relatively long study period* – at the time of writing the BDD lets us view and analyse 14 years of benefit history at the individual level
- *no sampling error, or response or attrition bias* – the data set contains information on all benefit recipients and not a sample, so sampling error, response bias and bias resulting from attrition are not issues for this analysis
- *continuous longitudinal data* – the continuous nature of the data set means that we are not limited to monthly or quarterly snapshots of benefit status, which means we are able to observe benefit spells of relatively short duration, making our calculations of total time spent on benefit very precise.

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[6] Unemployment-related benefits are the Unemployment Benefit and Unemployment Benefit Hardship. The Domestic Purposes Benefit (DPB) includes the DPB − Caring for Sick or Infirm, DPB − Sole Parent, DPB − Woman Alone, and Emergency Maintenance Allowance.

[7] The BDD uses historical benefit administration data stored on the MSD Information Analysis Platform (IAP) to construct individual histories of benefit use. It is updated biannually. It includes no name or address information that could be used to identify individuals. See Wilson 1999 or Wilson 2001 for a more detailed description of the data.

As far as we are aware, the combination of these last two features is unusual. Researchers engaged in similar analyses in other countries often rely on fortnightly, monthly or quarterly snapshot data and/or data for only a sample of social assistance recipients (e.g. Bradbury 2006, Gregory and Klug 2002, Platt 2006).

Longitudinal data based on administrative records data does have limitations, including:

- *errors in reporting, recording and assembling data* – although efforts are made to check and correct for errors, not all can be identified and accounted for
- *limited variables for analysis* – the data available are limited to information collected or created in the process of benefit administration, one consequence of which is that key socio-demographic information (such as the ethnicity of children included in a benefit)[8] is not recorded
- *limited population coverage* – the data include no records for caregivers or children who had no contact with the benefit system, and we are required to estimate the size of this group in order to calculate the measures presented in this paper.

The method of analysis is to consider all children born between 1 January 1993 and 31 December 2007 who were included as a dependent child in a main benefit, grouped into calendar year birth cohorts. We calculate indicators of whether or not each of these children was included in a benefit at different ages, and calculate their total duration included in a benefit by given ages.[9] We then combine these calculations with estimates of the total population in these birth cohorts potentially able to be included in benefits to estimate measures of the prevalence and persistence of benefit receipt for the cohorts of children overall (including those not receiving a benefit). The approach we take to this varies depending on the specific measure, and is documented in the text and in notes to the tables and figures presented.

FINDINGS

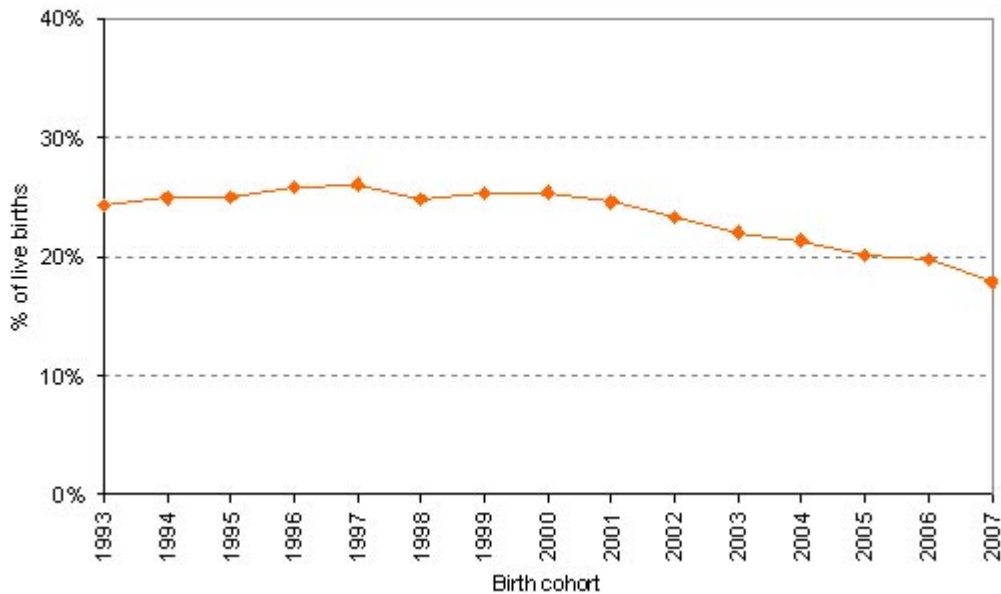### The Proportion of Children Included in a Benefit at Birth Has Fallen

Figure 2 shows the estimated proportion of children in each cohort included in a main benefit at birth.[10] Throughout most of the 1990s around 25% were included in a benefit on the date of their birth or very soon after. Since 2000 this proportion has declined to 20% of children born in 2005 and 2006, and 18% of children born in 2007.

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[8] However, analysis by the ethnicity of the caregiver claiming benefit can be informative (see Platt 2003, Platt 2006 and Barrett et al. 2003).

[9] For a full list of the data-cleaning techniques applied, see Ball and Wilson (2002).

[10] Our count of children included at birth includes children who were included in a benefit within eight weeks of birth with a caregiver whose benefit receipt was ongoing on the date of their birth. Ball and Wilson (2002) found that the proportion of children having contact rose steeply over the first few weeks from birth, and when the caregiver's benefit status prior to the child's inclusion was examined it appeared that in most cases this reflected a delay in applying for the child to be included in a benefit that was already ongoing.

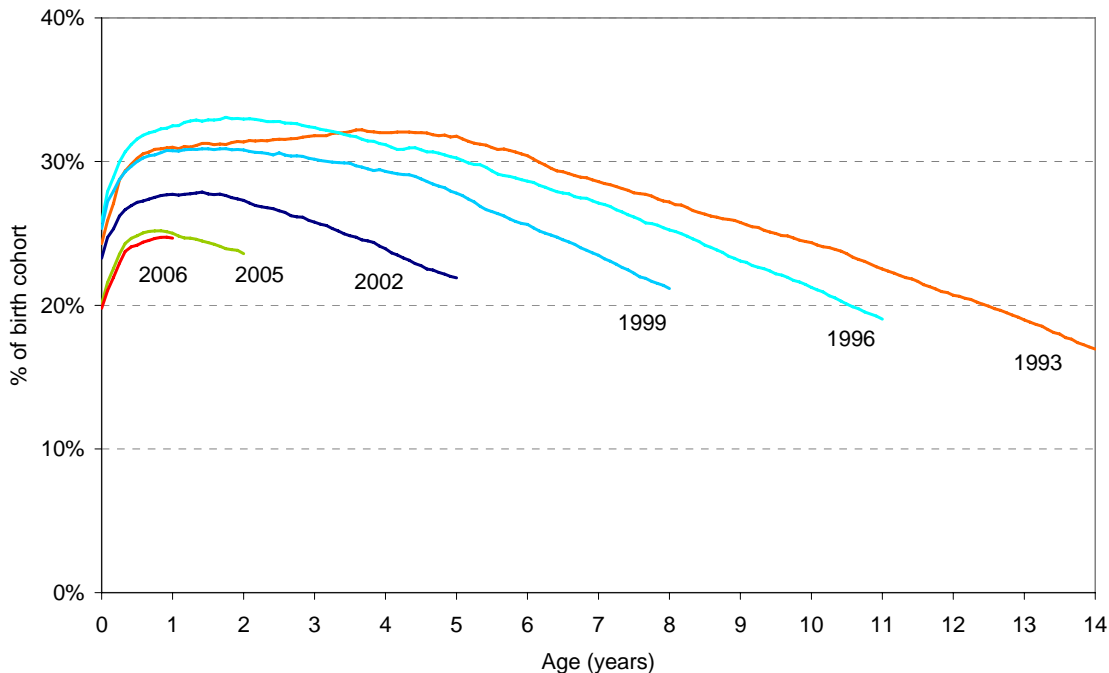**Figure 2 Estimated percentage of children included in a main benefit at birth, by birth cohort[11]**

Sources: MSD: BDD; SNZ: number of live births, years ended 1993–2007.

The Proportion of Children Included in a Benefit at Each Birthday Has Fallen

Figure 3 shows the estimated proportion of children in selected cohorts included in a benefit at monthly intervals from birth. At the time of writing we could follow the 1993 birth cohort (young people turning 15 in 2008) until their 14th birthday. Children born in later years could be followed for shorter periods.

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[11] Estimated by dividing the number of children included in a benefit on their birth date (or included in a benefit that was ongoing on their birth date within eight weeks of birth) by the number of live births (Statistics NZ, *Demographic Trends 2006*).

Figure 3 Estimated percentage of children included in a main benefit, by age and birth cohort[12]

Sources: MSD: BDD; SNZ: number of live births, years ended 1993–2006; national population estimates by single year of age, mean for year ending December 1993–2006.

Children in more recent birth cohorts were less likely than children born in the 1990s to be included in a main benefit at all ages for which comparisons can be made. At the age of two an estimated 24% of children born in 2005 were included in a benefit, compared with 33% of children born in 1996. This represents a nine percentage point reduction in the proportion of children supported by main benefits at this age.

The age at which the proportion of children included in a main benefit peaks has fallen considerably. For example, the proportion of the 1993 cohort included in a benefit peaked between the ages of four and five, while for the 2001 cohort rates of receipt peaked between the ages of one and two, and for the 2005 cohort it appears to have peaked before age one.

Just Over Half of Children Currently Reaching Adolescence Have Been Supported by the Main Benefits at Some Time

Using the BDD we can obtain the number of individual children born in 1993 who had spent some time included in a benefit by different birthdays over their first 14 years. Figure 4 expresses this number as a proportion of all those who could potentially have received a benefit, using two alternative denominators.

Line (A), the higher of the two lines, was calculated by dividing the number ever included by each age in the BDD by the number of registered live births in 1993. The number of live births clearly understates the number of children born in this year ever potentially able to be

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[12] Live births are used as the denominator at age zero. Population estimates are used as the denominator for our calculations of the proportion of each birth cohort included in a main benefit at the mid-point of each year of age. Linear interpolation is used to estimate the number of children present in the population in the intervening months.

included in the main benefits because it excludes the children who migrated to New Zealand over the period of the study.

For the denominator in line (B) we added to the number of live births an estimate of the number of individual children born in 1993 who had entered the population as migrants by each birthday using Statistics New Zealand permanent and long-term arrivals data.[13] Our estimates suggest that just over 55% of children born in 1993 ever present in New Zealand were included in a benefit at some point by age 14. There was little increase in the proportion of the cohort having any contact beyond age five. Of the children who had contact in their first 14 years, 58% were included in a benefit at least once by their first birthday, and 82% were included at least once by their fifth birthday.

We use the estimation approach taken for line (B) for all the tables and figures in the remainder of the paper. The Appendix gives more details of the estimation method and potential sources of over-estimation and under-estimation. On balance, we expect the estimates to overstate the number of different children ever present (for example, this method would double-count children born in New Zealand who left the country and subsequently arrived as permanent or long-term migrants). The estimates of the proportion of children in each cohort who had contact with the benefit system and who had extended contact with the benefit system presented in this paper are therefore likely to be conservative.

Figure 4 Estimated proportion of the 1993 birth cohort having contact with main benefits by each age, using as alternative denominators (A) the number of live births and (B) an estimate of the number ever present, which includes those arriving as migrants
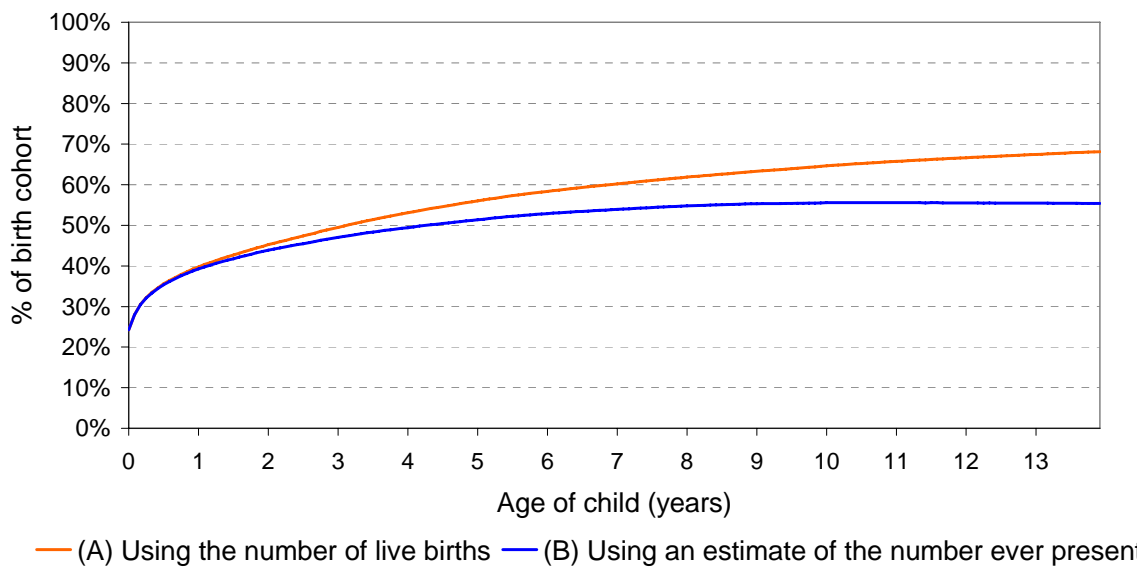
Sources: MSD: BDD; Statistics New Zealand: number of live births; permanent and long-term arrivals by single year of age, years ended December 1993–2007.

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[13] Estimates for the intervening months are obtained using linear interpolation.

A Sizeable Minority of Children Currently Reaching Adolescence Have Spent Very Long Periods Supported by Main Benefits

Ball and Wilson (2002) estimated that one in five children born in 1993 spent at least five of their first seven years supported by a main benefit. Table 1 provides updated estimates that examine these children's experiences up to age 14. It shows the estimated proportion of the cohort spending different total lengths of time included in a benefit over their first 14 years. For many the duration was fairly short, but one in five children born in 1993 are estimated to have been supported by a main benefit for seven or more of their first 14 years of life. An estimated one in ten spent a total of 11 or more of their first 14 years of life supported by a main benefit.

Table 1 Estimated proportion of 1993 birth cohort spending different total amounts of time supported by a main benefit by age 14[14]

Duration	% of cohort	Cumulative % of cohort
All 14 years	2	2
13−< 14 years	4	6
12−< 13 years	3	8
11−< 12 years	2	11
10−< 11 years	2	13
9−< 10 years	2	16
7−< 9 years	5	21
5−< 7 years	6	27
3−< 5 years	7	34
1−< 3 years	10	44
Up to 1 year	11	55
No contact	45	

Sources: MSD BDD; SNZ: number of live births; permanent and long-term arrivals by single year of age, year ended December 1993-2007.

Children Born after 2000 Have Spent Fewer of Their Early Years Included in a Benefit than Children Born in the 1990s

Children in more recent birth cohorts were less likely than children born in the 1990s to be included in a benefit at various ages. The figures below indicate that this was associated with both a fall in the estimated proportion of children ever being included in a benefit, and a fall in the estimated proportion experiencing persistent inclusion.

Table 2 shows that, of the estimated population of children ever present and potentially able to be included in a benefit, the proportion who spent no time in their first year included in a benefit increased from around 60% for those born in the 1990s to 70% for those born in 2006.

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[14] Total time is calculated by summing all spells included in a benefit over the first 13 years of life. Breaks in receipt of less than 14 days are treated as part of a continuous spell and are included in the calculation. Our estimate of the total number of children who could have spent time on a benefit by age 14 is the number of births in 1993, plus an estimate of the number of children born in that year who entered New Zealand as permanent and long-term migrants before age 14 (see the Appendix).

The proportion spending all of their first year included in a benefit dropped from a high of 20% for those born in 1996 to 15% for those born in 2005 and 2006.

Table 2 Estimated percentage of children in cohort spending given percentages of total time included in a main benefit by age one (selected birth cohorts)[15]

| | Birth cohort | | | | | |
	1993	1996	1999	2002	2005	2006
0% (no time)	61%	60%	61%	64%	69%	70%
1−49%	9%	9%	9%	9%	7%	7%
50−99%	12%	11%	10%	10%	9%	8%
100%	18%	20%	19%	18%	15%	15%
All in cohort	100%	100%	100%	100%	100%	100%

Sources: MSD: BDD; SNZ: number of live births, years ended 1993–2006; permanent and long-term arrivals by single year of age, years ended December 1993–2007.

Table 3 shows the proportion spending different amounts of time included in a benefit by age three. The difference between the birth cohorts of the 1990s and early 2000s is again marked, with the proportion spending no time at all included in main benefits increasing from an estimated 52% for the 1996 birth cohort to 62% for the 2004 birth cohort.

Table 3 Estimated percentage of children in cohort spending given percentages of total time included in a main benefit by age three (selected birth cohorts)

| | Birth cohort | | | | |
	1993	1996	1999	2002	2004
0% (no time)	53%	52%	54%	58%	62%
1−49%	17%	17%	17%	16%	15%
50–99%	18%	18%	16%	15%	13%
100%	11%	14%	13%	11%	10%
All in cohort	100%	100%	100%	100%	100%

Sources: MSD: BDD; SNZ: number of live births, years ended 1993–2004; permanent and long-term arrivals by single year of age, years ended December 1993–2007.

Children Born More Recently Have Been Less Likely to Have Multiple Spells of Inclusion in a Benefit

The following table shows the estimated proportions of children in the 1993 and 2002 birth cohorts who spent different lengths of time included in a benefit by age five, broken down by whether that time was spent in a single continuous spell or multiple spells. A spell is defined as a period of benefit receipt where any breaks in receipt last for no longer than 14 days.

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[15] Total time is calculated by summing all spells included in a benefit over the first year of life. Breaks in receipt of less than 14 days are treated as part of a continuous spell and are included in the calculation. Our estimate of the total number of children who could have spent time on a benefit by age one is the number of births in the corresponding year, plus an estimate of the number of children aged under one who entered New Zealand as permanent and long-term migrants in that year.

Table 4   Estimated percentage of children in cohort with different total durations included in main benefits in single and multiple spells by age five

1993 birth cohort

Number of spells	Duration less than 2 years	2 to 3 years	4 to 5 years	All 5 years	All durations
Single	12%	5%	5%	8%	30%
Multiple	7%	7%	7%		21%
Total	19%	12%	11%	8%	51%

2002 birth cohort

Number of spells	Duration less than 2 years	2 to 3 years	4 to 5 years	All 5 years	All durations
Single	12%	6%	4%	7%	29%
Multiple	6%	6%	4%		16%
Total	18%	12%	8%	7%	46%

Sources: MSD: BDD; SNZ: number of live births, years ended 1993 and 2002; permanent and long-term arrivals by single year of age, years ended December 1993–2007.

Children in the later cohort were less likely to spend their time included in a benefit in multiple spells. The proportion with multiple spells on a benefit declined from 21% for children born in 1993 to 16% for those born in 2001. This is likely to partly reflect the decline in the proportion of children included as a dependent in unemployment-related benefits between 2001 and 2007: recipients of unemployment-related benefits are more likely than other groups to cycle on and off a benefit as they enter and exit employment (Wilson 1999).

CONCLUSION

This paper updates an earlier examination of children's inclusion in the main benefits. The findings presented here show that up until 2007 children born between 2000 and 2007 were less likely to be included in a main benefit at each age than children born during the 1990s, less likely to spend long periods of time in their early years included in a benefit, and less likely to spend the time included in a benefit in multiple spells. Although the overall trend has been one of reduction, the main benefits continue to provide financial support for many children, particularly at younger ages.

Finally, the data presented point to a group of young people born in the 1990s who experienced extended periods supported by the main benefits. An estimated one in five children born in 1993 spent seven or more of their first 14 years of life included in a benefit, and one in ten spent 11 or more of those years included in a benefit.

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APPENDIX

We use the following formula to calculate our estimates of the number of different children born in each year ever present in the population and potentially able to receive the main benefits by given ages.

(A) The number of live births in a calendar year + (B) an estimate of the number of children born in that calendar year who entered as a permanent or long-term migrant at each age = (C) the estimated number of different children potentially able to receive the main benefits at some time between birth and each birthday.

For example, the number of children born in 1993 potentially able to receive the main benefits at some time by age 14 is calculated as:

	(A) live births in 1993 (Source: Statistics New Zealand)	58,782
+	(B) estimated number of permanent or long-term migrants born in 1993 who entered by age 14	13,621
=	(C)	72,403

where (B) is approximated by the sum of the shaded cells in the table below.

Table A1 Permanent and long-term arrivals, by age group, calendar years

							Age at arrival							
Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
1993	755	956	897	797	828	756	727	697	730	706	738	722	735	787
1994	910	1,043	996	1,075	1,014	905	913	867	878	892	877	845	874	956
1995	1,059	1,301	1,311	1,252	1,270	1,287	1,227	1,219	1,136	1,111	1,082	1,077	1,127	1,056
1996	972	1,256	1,190	1,256	1,216	1,255	1,115	1,101	1,058	1,045	1,053	1,037	1,024	1,040
1997	809	988	992	994	974	941	931	934	887	864	839	788	864	823
1998	648	885	788	824	871	767	831	801	789	734	691	685	614	647
1999	645	849	790	787	808	773	744	737	759	736	645	651	604	609
2000	622	774	834	798	829	737	756	735	744	697	722	757	678	656
2001	687	983	954	945	957	944	926	937	917	954	984	1,015	912	924
2002	805	1,108	1,170	1,146	1,161	1,148	1,119	1,132	1,157	1,123	1,225	1,138	1,064	1,148
2003	847	1,165	1,097	1,151	1,075	1,126	1,060	1,025	1,121	1,086	1,155	1,091	1,089	1,063
2004	857	1,022	1,026	1,016	1,017	968	908	911	927	981	931	1,004	931	971
2005	916	1,102	1,109	970	1,041	964	952	938	922	967	1,013	1,014	922	900
2006	918	1,130	1,159	1,055	1,066	1,031	985	1,004	990	980	1,036	971	977	915

Source: Statistics New Zealand.

This estimation approach will overstate the number of individual children ever present and potentially able to receive the main benefits to the extent that:

- children born in New Zealand who migrated overseas later returned to New Zealand as permanent or long-term migrants[16]
- children arrived in New Zealand as permanent or long-term migrants more than once in the period
- children who arrived in New Zealand as permanent or long-term migrants then left New Zealand before their caregiver achieved sufficient residency to qualify for the main benefits (people must generally be resident in New Zealand for at least two years before they are able to claim main benefits, unless they are able to qualify on the grounds of hardship).

The approach will understate the number ever present and potentially able to receive the main benefits to the extent that:
- children who arrived in New Zealand as short-term or temporary migrants later became resident in New Zealand (the Work to Residence policy introduced in 2002 made changing residency status once in New Zealand a more common route to permanent residence)
- not all births are registered (this is likely to be a more modest source of underestimation).

On balance, we expect that we overestimate the number ever present.

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[16] These children could be excluded in future analyses by using customised permanent and long-term migration data by single year of age and country of birth. However, country-of-birth information has been collected only since July 2000 and as a result could not be used to consistently adjust estimates for the birth cohorts compared in this analysis.