New Zealand's teenage birth rate

Is it time to stop worrying about it?

A discussion paper
Lindsay Mitchell, August 2021

FAMILY FIRST NEW ZEALAND
WHĀNAU TAHI AOTEAROA

ABOUT FAMILY FIRST NZ

Family First NZ is a charitable organisation formed in 2006, and registered as a charity with the Charities Commission. Its purposes and aims are:

- to promote and advance research and policy regarding family and marriage
- to participate in social analysis and debate surrounding issues relating to and affecting the family
- to educate the public in their understanding of the institutional, legal and moral framework that makes a just and democratic society possible
- to produce and publish relevant and stimulating material in newspapers, magazines, and other media relating to issues affecting families
- to speak up about issues relating to families that are in the public domain

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She has also kept a blog since 2005 and counts herself as a rarity in blog survival rates.

When she isn't writing and researching, Lindsay paints and exhibits, specialising in Maori portraiture.

Lindsay has written five previous reports for Family First NZ:

- Child Poverty & Family Structure: What is the evidence telling us? (2016)
- Child Abuse & Family Structure: What is the evidence telling us? (2016)
- Imprisonment & Family Structure: What is the evidence telling us? (2018)
- Families: Ever Fewer or No Children, How Worried Should We Be? (2019)
- The challenges facing children in step-families: What we know, don't know, and how to fill in the gaps. (2021)

EXECUTIVE SUMMARY

Babies of teenage mothers are at greater risk of still birth, infant mortality, low birth weight, Sudden Unexplained Death in Infancy (SUDI), hospitalisation and experience lower rates of breastfeeding and cognitive achievement. Their mothers are more likely to suffer from mental ill-health, post-natal depression, relationship breakdown, and to be unemployed or missing out on education or training.

As a group, teen parents tend to have few educational qualifications, poorer mental health, and higher rates of smoking, alcohol and drug use than the rest of the population. Most are dependent on a benefit and remain so long-term. Being a teen mother commonly co-occurs with having no partner and living in a public rental.

As a group, teen parents tend to have few educational qualifications, poorer mental health, and higher rates of smoking, alcohol and drug use than the rest of the population.

Young adult offspring of teen mothers are at risk for a range of adverse outcomes including early school leaving, unemployment, early parenthood, and violent offending.

Since 2008 the teen birth rate has however plummeted from 33.35 births per 1,000 <20-year-olds to 12.25 in 2020. For Maori, the rate fell from 78.00 to 29.72 over the same period. The number of teen births more than halved from 5,223 in 2008 to just 1,893 in 2020.

This presents a pertinent question: **Is it time to stop worrying about the teenage birth rate?**

Or, alternatively, do those teen mothers exhibiting the greatest risk as parents persist as a subset and grow as a proportion?

To address the questions, known inputs associated with teen mothers are examined: the use of tobacco, alcohol and other substances; residence in low socio-economic areas; high rates of obesity; low rates of breastfeeding; poor mental health; relationship breakdown; a history of care and protection and low maternal education.

Poor child outcomes associated with teen mothers are traversed including infant and perinatal mortality; sudden unexplained infant deaths; birth weight; hospitalisations; maltreatment; welfare dependence and cognitive achievement. Incidence and trends for both are sought and, in some instances, identified.

Coincidental to teen birth rate decline since 2008, improvements are found - fewer maltreatment substantiations; declining hospitalisations for assault, maltreatment and neglect injuries; and higher pre-school attendance (which could indicate greater cognitive achievement). But there are also coincidental worsening outcomes: higher child hospitalisation rates for medical reasons and increasing child mental health and behavioural problems. In the absence of maternal age-specific data these developments cannot be labelled anything more than coincidental.

Some inferences drawn about inputs appear sound, however. For instance, it is incongruous that the mental health of teen mothers would be improving against a backdrop of generally declining teen mental health. It is also highly unlikely that the *teen* 6-month breastfeeding rate has improved while the *general* 6-month rate declines. As a growing proportion of teen mothers enrols in a teen parent unit it might be assumed maternal education is improving. It remains the case however that most do not enrol.

Significantly, other worrying findings are supported by data. The disproportionate perinatal mortality rate for teen mothers remains tragically and unacceptably high, and possibly rising; teen mother obesity, which increases pregnancy and birth complications, is rising; a greater concentration of teen parents live in the highest deprivation quintile and dependency on benefits remains stubbornly high.

Compounding all of this, teen mothers and their children are susceptible to 'falling through the cracks'. Drop-out from the Growing Up in New Zealand study typically comprises Māori, Pacific or Asian teen mothers living in high deprivation areas with incomplete education. About those children who present the greatest concern, we know the least.

Young adult offspring of teen mothers are at risk for a range of adverse outcomes including early school leaving, unemployment, early parenthood, and violent offending.

What we do know is when young females delay first births, their own life opportunities increase. Becoming mothers with risk-taking years behind them, having completed their education and/or acquired work skills, and established economic and relationship stability, makes a world of difference to their own lives and their children's.

A continuing decline in the teenage birth rate should be actively encouraged and welcomed. There is no margin for complacency.

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IS IT TIME TO STOP WORRYING ABOUT THE TEENAGE BIRTH RATE?

Background

> *"Having a mother who was a teenage parent commonly co-occurred with having no partner, living in a public rental and having incomplete secondary school education."*
>
> Growing Up in New Zealand Study (GUiNZ)

Babies of teenage mothers are at greater risk of still birth, infant mortality, low birth weight, Sudden Unexplained Death in Infancy (SUDI), hospitalisation and experience lower rates of breastfeeding and cognitive achievement. Their mothers are more likely to suffer from mental ill-health, post-natal depression, relationship breakdown, and to be unemployed or missing out on education or training[1].

According to the 2011 Welfare Working Group, "Children being raised by teen parents on a benefit are a particular concern from a child development perspective. There is compelling evidence that children of teen parents are at greater risk of a range of poor outcomes. This is partly because as a group, teen parents tend to have few educational qualifications, poorer mental health, and higher rates of smoking, alcohol and drug use than the rest of the population."[2]

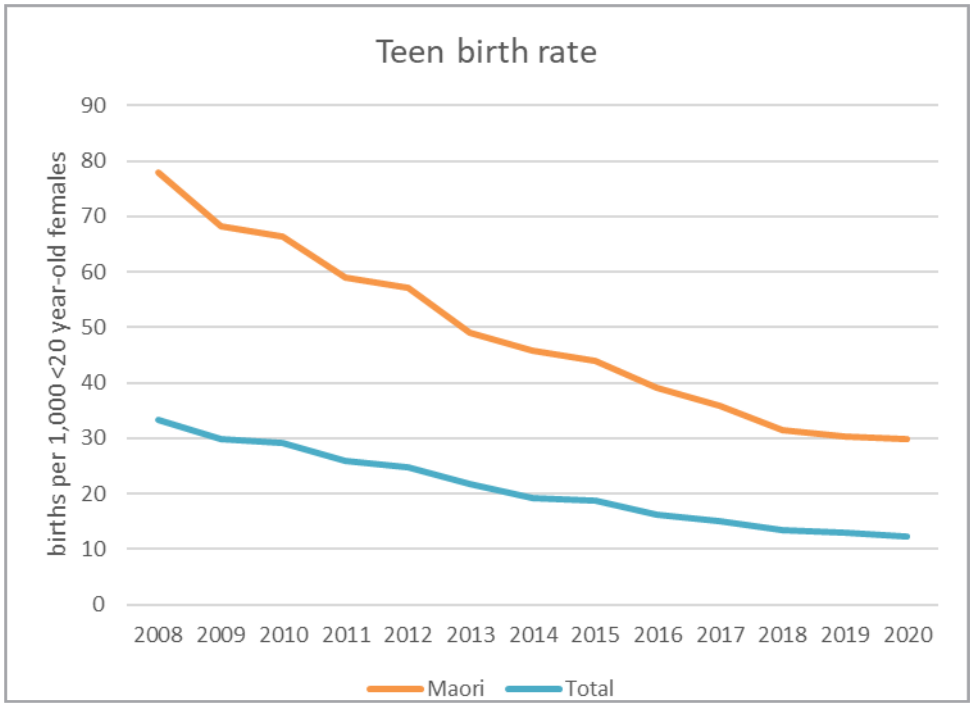
Furthermore, the inter-generational transfer of disadvantage is demonstrated by the Dunedin Multidisciplinary Health and Development Study data which found, "young adult offspring of teen mothers are at risk for a range of adverse outcomes including early school leaving, unemployment, early parenthood, and violent offending."[3]

The more recent longitudinal Growing Up in New Zealand Study (GUiNZ) originating in 2009/10 produced a report focused on child vulnerability and observed, "having a mother who was a teenage parent commonly co-occurred with having no partner, living in a public rental and having incomplete secondary school education."[4]

Additionally, the Social Policy Evaluation and Research Unit reported, "...sole parents who had their first child below the age of 20 were nearly two and a half times as likely to experience multiple disadvantage than sole parents who had their first child aged 25 to 35."[5]

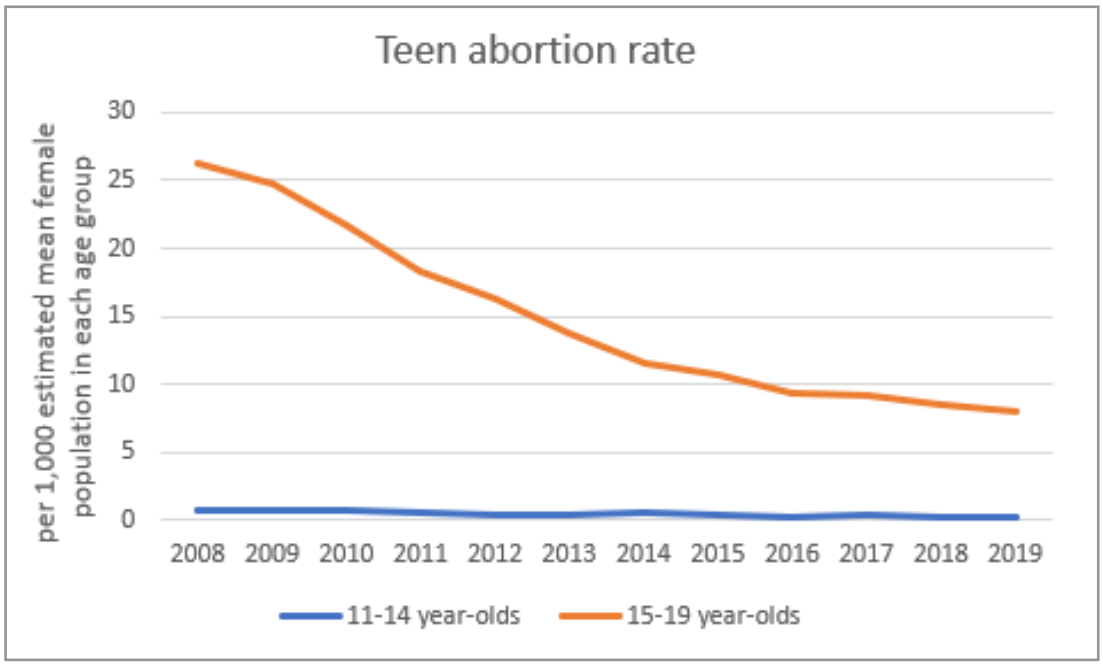
Data

New Zealand's teen birth rate has been falling since 2008, from 33.35 births per 1,000 <20-year-olds to 12.25 in 2020. For Māori, the rate fell from 78.00 to 29.72 over the same period. The number of teen births more than halved from 5,223 in 2008 to just 1,893 in 2020.[6]



Data source: Infoshare, Statistics NZ, Table: Age-specific fertility rates by single year of age (Total population) (Annual-Dec)

This rapid fall is not the result of more abortions.



Data source: Infoshare, Statistics NZ, Table: Abortion rates by age of woman (Annual-Dec)

The teen abortion rate trajectory mirrors that of the teen birth rate since 2008. Therefore, the teenage conception rate is plummeting. Reasons for the decline have been variously suggested as: better access to more effective contraception, especially long-acting reversible contraceptives and the morning-after pill; teenagers engaging in later and less sexual activity; increased parental acceptance of teenage sex increasing positive intervention and practical advice; welfare reform and teenagers engaging in more 'virtual' or same-sex behaviours. The decrease is a developed-world phenomenon which suggests that social, cultural influence via mainstream, and more latterly social media is playing a significant role. The American reality-TV show *16 and Pregnant*, viewed by millions internationally, is believed to have increased negative views about teenage pregnancy among viewers and materially affected teen birth rates.[7] Other researchers however contest this view.[8]

In Australia, "Births to teenage mothers decreased by more than 40% between 2006 and 2017 from 17.6 to 9.2 per 1,000 females aged 15–19."[9] In the United Kingdom, "Since 1999, conception rates for women aged under 18 years have decreased by 62.7%,"[10] and in the United States, "Since 2009, the teen birth rate has fallen to a new low each year. The rate for this group [15-19] has declined 58% since 2007."[11]

This presents an obvious question: Is it time to stop worrying about the teenage birth rate?

Or, alternatively, do those teen mothers exhibiting the greatest risk as parents persist as a subset and grow as a proportion?

To address the questions, known inputs associated with teen parents are examined: the use of tobacco, alcohol and other substances; residence in low socio-economic areas; high rates of obesity; low rates of breastfeeding; poor mental health; relationship breakdown; a history of care and protection and low maternal education.

Poor child outcomes associated with teen mothers are traversed including infant and perinatal mortality; sudden unexplained infant deaths; birth weight; hospitalisations; maltreatment; welfare dependence and cognitive achievement. Incidence and trends for both are sought and identified.

MATERNAL INPUTS

Alcohol and tobacco use

The Ministry of Health has initiated a programme to reduce the incidence of Fetal Alcohol Spectrum Disorder (FASD) which affects babies exposed to alcohol during pregnancy. Their target audience is 18- to 24-year-olds because, "they drink more frequently and at riskier levels than other populations. Māori and Pacific young people in this age group are a priority."[12]

Researchers surveying the GUiNZ mother cohort found, "Drinking four drinks or more a week during pregnancy was more common among younger women, Māori women, women with no secondary qualification, smokers, and women whose pregnancy was unplanned."[13]

9.3% of GUiNZ teen mothers had experienced being a 'problem drinker or alcoholic' by the time their child was 54 months. This compares to 3.8% of mothers >21.[14]

Recent evidence regarding perinatal related mortality (deaths between 20 weeks pregnancy to 27 days after birth) finds, "The association between young maternal age and perinatal mortality is most likely confounded by socioeconomic deprivation and smoking."[15]

The Perinatal and Maternal Mortality Review Committee (PMMRC) reported in 2015 that 45 percent of teenage mothers of babies who died were current smokers compared to 27 percent of all mothers of babies who died.[16]

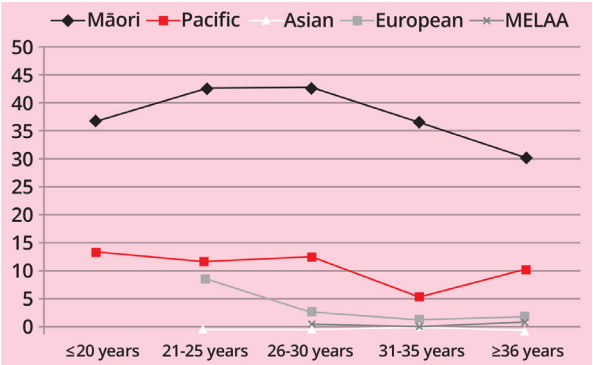
In terms of the general trend amongst surveyed young people, "There were very large declines in cigarette smoking and binge drinking for New Zealand secondary school students from 2001–2019. This finding is consistent with international research highlighting a general decrease in youth substance use in many countries in the first part of the 21st century."[17]

With respect to Māori females, who made up 59.3% of mothers under twenty during 2009-2018[18], there have been, "strong decreases in the prevalence of cigarette smoking and binge drinking, particularly among rangatahi Māori females. From 2012 to 2019, the proportion of Māori females who smoked cigarettes weekly or more often decreased from 10.4% to 3.4%, and binge drinking reduced among Māori females from 36% in 2012 to 28%."[19]

However, teen mothers may not be typical of female teens. Additionally, teen behaviours vary markedly between the ages of 13 and 19.

2020 data from National Women's Hospital in Auckland showed 37% of Māori expectant mothers <20 smoking (rising slightly among 21-30-year-olds). Māori is the only ethnicity to display an increase in the smoking rate in the 21–30-year-old bracket:

Smoking rates at booking by age and ethnicity NWH 2020



Source: National Women's Hospital, Annual Clinical Report, 2020

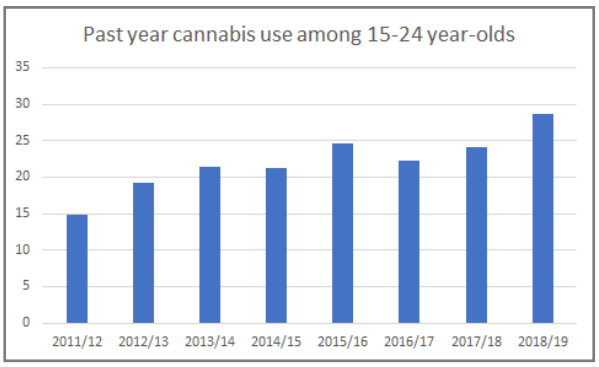
Nationally, in 2019 one in three pregnant teens registering with a Lead Maternity Carer (LMC) were smokers and 67% of these young women are also smokers two weeks after giving birth.[20] There was only a small reduction in

mothers <20 smoking at registration with LMC between the periods of 2008-2012 and 2013-18 from 36.4 to 34.4 percent.[21] (The PMMRC makes no qualification of smoking in respect of tobacco or cannabis.)

In 2007 a New Zealand survey of 220 mothers attending a Teen Parent Unit (TPU) found a majority reported having used cigarettes, alcohol, and marijuana. On a positive note, "Of the 89% of TPU students who drank alcohol regularly prior to their pregnancy, almost 90% reported that they had cut out alcohol completely during their pregnancy."[22] Given teen pregnancies are generally unplanned and unconfirmed till late in the first or into the second trimester[23], a question mark hangs over whether the mothers drank regularly until that point. Unfortunately, the survey has not been repeated and comparative, more recent data is not available.

Other substance abuse

Canterbury DHB maternity advice states: "Marijuana is the most commonly used illicit substance. There is evidence that Marijuana increases the risk of spontaneous preterm birth independent of cigarette smoking status and socio-economic status. Evidence also suggests that women who continue to use marijuana at 20 weeks gestation are five times more likely to deliver preterm than those who do not, and the rate of early spontaneous preterm birth is higher amongst women who continue to use marijuana at 20 weeks gestation. There are associations with long term cognitive impact in the children such as problem solving difficulties and deficits in learning and memory."



Data source: Ministry of Health, Annual Data Explorer, Adults Topic: Illicit drug use

The Youth19 survey series comprising 36,000 high school students showed decreasing levels of weekly cigarette use and binge drinking but increasing weekly cannabis use up from 3.6% in 2012 to 4.1 percent in 2019. In fact, cannabis use was 58% higher than tobacco use.[24]

Considering the known higher tobacco use among pregnant teens it would be reasonable to extrapolate higher cannabis use.

Continuing with Canterbury DHB advice: "Methamphetamine is neurotoxic to the developing fetus. There is not a large body of evidence of its affects in pregnancy, but it may be associated with Intrauterine Growth Restriction."[25]

The 2007 TPU survey found over a quarter of students had tried herbal highs or legal party pills, and 12% had tried "P" or methamphetamine. Again, these rates are higher than general teen reporting and consistent with differentials found in United States research:

> *"In 2011-2012 pooled data for pregnant teens age 15 to 17, 18.3% reported past-month illicit drug use, a significant increase from 2009-2010 (15.7%). Young pregnant teens reported greater drug use compared to same-age non-pregnant peers (13.8%), double the rate of pregnant youth age 18-25 (9%), and 6 times the rate of pregnant women age 26 to 44 (3.4%)."*[26]

Similarly, GUiNZ data shows by child-age 54 months, 17.3% of mothers aged less than 18 at birth had used 'illegal street drugs.' For mothers aged 18-19 the percentage was slightly lower at 13.2%. For mothers >21 the percentage was 3.6%.[27]

In New Zealand, the birth rate of teen mothers undergoing mental health/substance usage (MHSU) treatment is declining though the numbers in this group are very small.[28]

In summary, the picture is mixed. There is concrete evidence of a very small decline in tobacco smoking in teen mothers (pre and post pregnancy) but cannabis use may be increasing. There is no data relating to trends in alcohol or other drug use specific to teen mothers. However, as recently as April 2021 the government took steps to expand its Pregnancy and Parenting Programme aimed specifically at minimising harm from alcohol and other drugs. These services now operate 'by Māori, for Māori' in Whanganui, the Bay of Plenty, Waitematā, Tairāwhiti, Northland and Hawke's Bay.[29] While inference about a persistent problem may be drawn, the programme is not solely aimed at teen parents.

Low socio-economic status

An association between socio-economic deprivation and adverse outcomes exists for all children.

Around half of teen parents live in the most deprived quintile (Q5) with a further quarter in Q4.[30]

At 2016, according to the Ministry of Youth Development, "The New Zealand Deprivation Index (NZDEP), shows that the teen birth rate in the most deprived areas of New Zealand (NZDEP 9-10) is 6.5 times higher than the teen birth rate in the least deprived areas (NZDEP 1-2)."[31]

> ***"The teen birth rate in the most deprived areas of New Zealand (NZDEP 9-10) is 6.5 times higher than the teen birth rate in the least deprived areas."***
>
> Ministry of Youth Development

The PMMRC found in 2013: "... teen mothers are more likely to be having their first baby, to smoke, to be overweight and to live with socioeconomic deprivation."[32]

In 2019, Hiwa-i-te rangi Northland College TPU surveyed students' housing situations finding over a third were living in unsuitable housing defined as being poor quality, short-term or overcrowded; featuring drug or family violence problems and/or relationship and whānau issues.[33]

Compounding residence in deprived neighbourhoods, GUiNZ reported over half of children born to teenage mothers were, "experiencing mobility between the ages of nine months and two years."[34] Researchers speculated about an association between residential mobility, and behavioural and emotional problems in school age children. Moves disrupt friendships and family networks, connections to social services, GPs and pre-schools.

Trend-wise, in the five years to 2013,[35] 46.5 percent of teen mothers lived in the most deprived quintile; this rose to 51.4% in the five-year period 2014 to 2018. This almost 5-point increase indicates that as the teen birth rate has dropped, mothers are becoming more concentrated in the poorest quintile.

Obesity

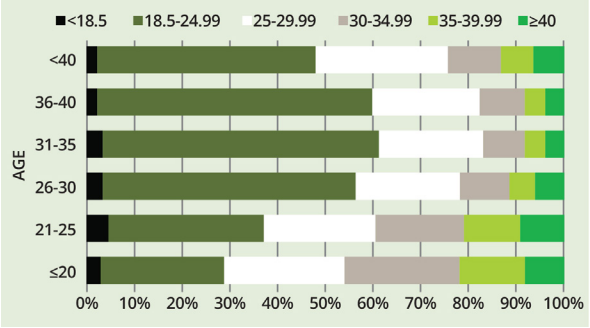
Pregnancy and birth complications are more numerous and severe as maternal weight increases.

Obesity (≥ 30.00 body mass index) in women giving birth is increasing in general. It rose from 22.1 percent in 2009 to 27.3 percent in 2018. In addition, the percent defined as overweight (25.00–29.99) stayed steady at 28.5%.[36]

As noted by PMMRC in 2013, teen mothers were more likely to be overweight or obese. During 2009-13, 16.7% teen mothers were obese. This increased to 22.1 percent in the following five-year period of 2014-18.[37]

Among women giving birth at Auckland's National Women's Hospital in 2020, the largest percentage with a BMI over 25kg/m2 was under 20 year-olds.

Distribution of BMI by maternal age NWH 2020

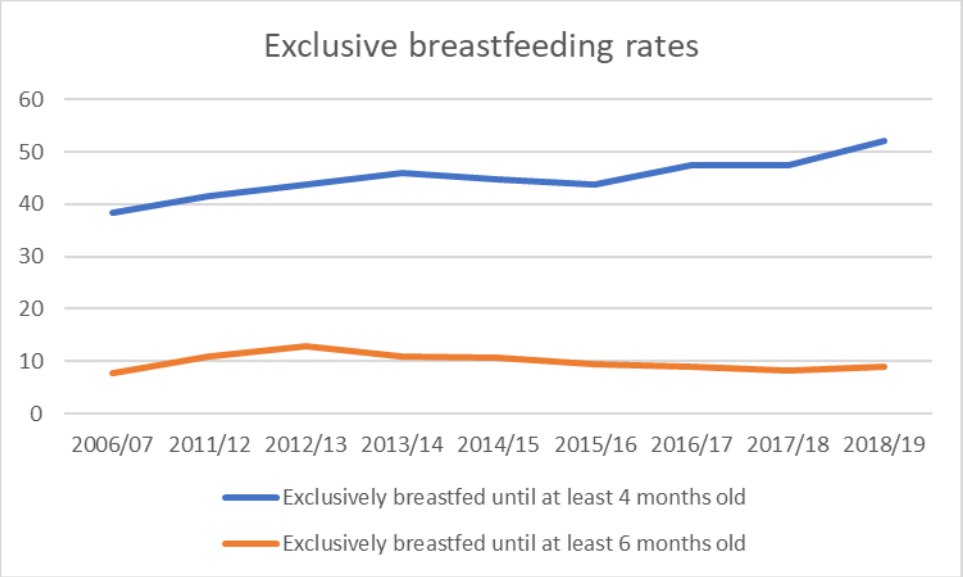


Source: National Women's Hospital, Annual Clinical Report, 2020

Breastfeeding

Research published in the New Zealand Medical Journal arising from GUiNZ data advises: "Breastfeeding reduces the risk of child deaths and of infectious disease morbidity. Breastfeeding is associated with fewer dental malocclusions, higher intelligence quotient scores and a reduced risk of overweight and diabetes… First-born children, those from unplanned pregnancies, and those whose mothers were younger (<20 years old) or less educated were at greater risk of having a shorter duration of any or exclusive breastfeeding."[38]

Ministry of Health advice is to exclusively breastfeed until the child is around 6 months old. While the 4 month rate has increased the 6 month rate has declined slightly:



Data source: Ministry of Health, Annual Data Explorer, Children Topic: Nutrition

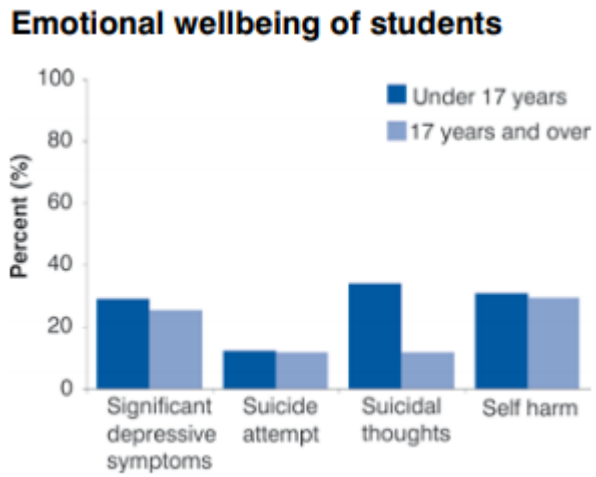
It is unlikely that teen breastfeeding rates are divergent from the overall trend. A study published in 2018 found "…breastfeeding duration in New Zealand's indigenous Māori is shorter than in non-Māori" and predictors for longer duration included "…being an older mother."[39]

Maternal mental health

According to GUiNZ researchers, "Being a young mother or having high levels of financial or relationship stress increased the chances of a mother having poorer mental health postnatally."[40]

One in five of the teen mothers from the GUiNZ study had experienced depression by the time their child was 4.5 years old. This compares to 7 percent of mothers aged >21 when their child was born.[41]

The 2007 TPU survey found 26 percent suffering "significant levels of depressive symptoms." A 2001 survey of the wider secondary school female student population found 18%. The researchers conducting the TPU survey concluded: "The level of depressive symptoms reported by TPU students was thus about 50% higher than their peers without children in mainstream schools."[42] Younger TPU students (<17) reported higher levels of depressive symptoms than those older.

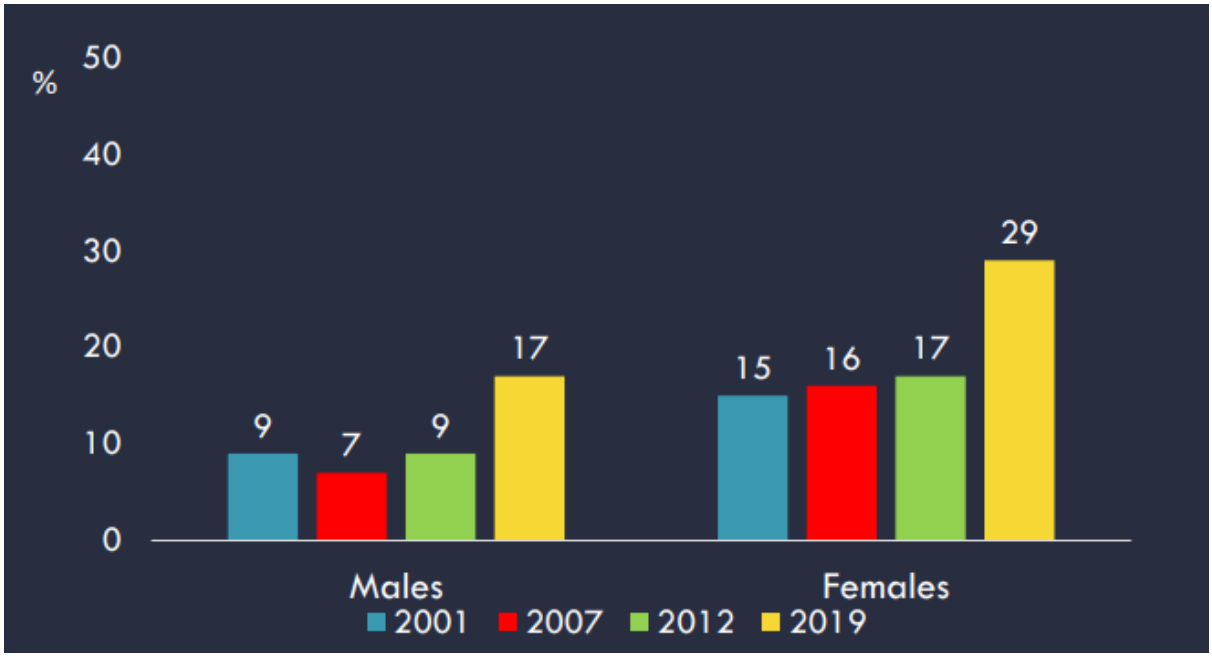


Source: The Health and Wellbeing of Secondary School Students attending Teen Parent Units in New Zealand August 2007

Psychological distress is generally trending up with prevalence in young adults aged 15–24 significantly higher than in adults aged 25 and over (14.5% compared to 4.2–8.7%).[43]

The Youth Survey 2000 series (canvassing 36,000 high school students) found the experience of depressive symptoms rising sharply between 2012 and 2019:[44]

Symptoms of Depression: Trends



Source: Youth19 Rangatahi Smart Survey, A Youth2000 Survey

For Māori females, those most likely to become teen parents, the percent experiencing symptoms of depression was even higher at 39 percent in 2019. If the relationship identified in 2007 by TPU researchers holds - that the experience of depressive symptoms in teen mothers is around 50% higher than in non-parent students - there is a strong likelihood poor mental health among teen parents is also increasing.

Relationship breakdown

For young people, poor mental health can be both a cause and result of relationship breakdown. According to United Kingdom data, two in three teenage mothers experience relationship breakdown in pregnancy or the three years after birth.[45]

In New Zealand, data from GUiNZ showed: "Almost one in four mothers of cohort children who were teenagers at the time their child was nine months had experienced a change in their relationship status between the antenatal and nine month interview points, in comparison to approximately 7.9% of mothers in the 20-29 age group, 2.2% in 30-39 age group and 2.8% of those over 40 years."[46]

"Teen mothers are less likely to be in a relationship with the child's father. This can have implications for the child's outcomes."

Ministry of Youth Development

The Ministry of Youth Development states, "teen mothers are less likely to be in a relationship with the child's father. This can have implications for the child's outcomes, particularly due to the challenges of supporting a child on one income. In New Zealand, sole parents and their children have significantly higher poverty rates than parents and children in two-parent families."[47]

The 2007 TPU survey found, "Only 30 - 50% of teenage mothers have ongoing contact with the father of their child, and how much involvement he has varies greatly depending on his age. In this survey, just under half of the TPU students (47%) reported they were still in a relationship with the child's father and 31% reported they were living with him."

Whether teen parents are experiencing increased instability of relationship may be indicated by benefit status. The percentage of teen parents relying on a Young Parent Payment, Sole Parent Support or Emergency Maintenance Allowance benefit has increased slightly since 2013 (see p21).

History of care and protection involvement

Females who have a history of involvement with the state's care and protection agency, currently Oranga Tamariki, are more likely to become a teen parent.

Females who have a history of involvement with the state's care and protection agency, currently Oranga Tamariki, are more likely to become a teen parent. Recent analysis of respective relevant birth rates found, "With the overall decline in teen birth rates, those who become young mothers may include a greater proportion of the most vulnerable and at-risk young women – i.e. Mental Health/Substance Usage (MHSU) treatment history, and/or Reports of Concern (ROC), and/or statutory history. The data shows that birth rates are reducing more slowly for those with a statutory history, have been the subject of a ROC, and/or have a MHSU treatment history, lending support to this hypothesis."[48]

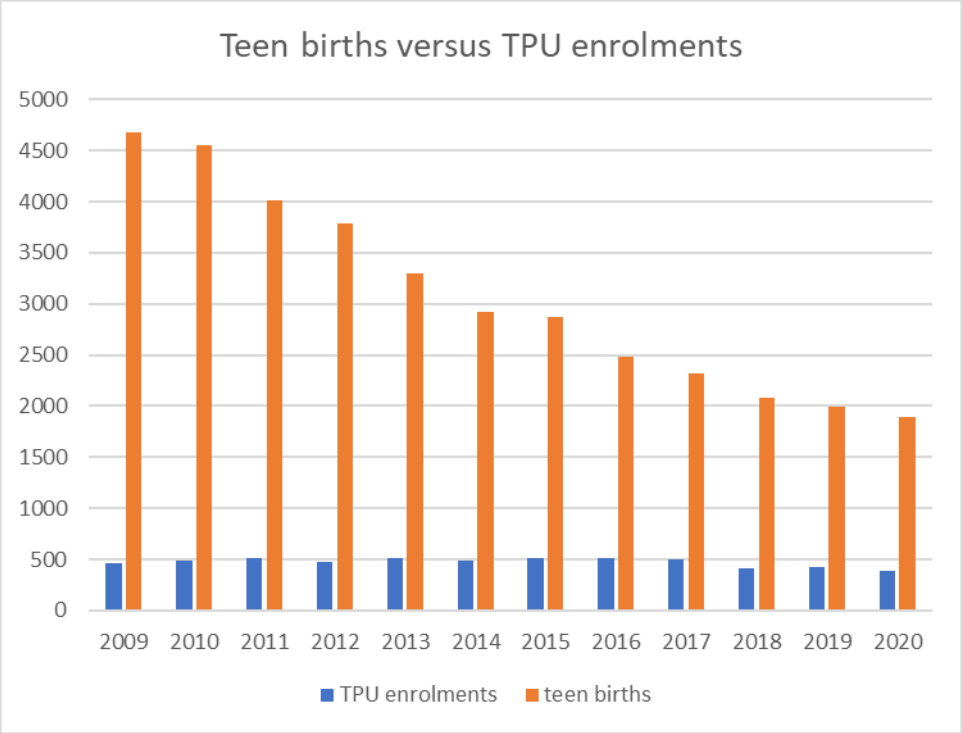
This directly supports the second proposition that, despite a substantial drop off in their numbers, those teen mothers exhibiting the greatest risk as parents persist as a subset and grow as a proportion.

Maternal education

At the time their child was born (2009/10) almost five percent (328) of the mothers in the GUiNZ cohort were teens and over half had no formal secondary school qualifications.[49] Since then an increasing proportion of teen parents has enrolled at a TPU, perhaps a proxy for maternal education.

Enrolment at Teen Parent Units

Numbers enrolled at Teen Parent Units have been relatively steady despite the steep decline in teen births. In 2009, 462 teen parents were enrolled, falling to 388 in 2020. Over time a greater share of teen mothers is continuing their secondary school education. While most teen parents do not enrol attendance at other tertiary institutions is a possibility.



Data sources: Teen Parents Evidence Brief 2019, School Rolls/Education Counts, Infoshare Statistics NZ, Table: Live births by age of mother (Annual-Dec)

In 2017 the Education Review Office found that of the 23 units, 19 were performing at either a 'highly effective' or 'mostly effective' level. Research commissioned by MSD examining academic achievement found "strong evidence of an advantage for young women who transfer into the TPU hosted by their present school" but being enrolled at any school at the time of conception conferred an advantage over a teen who became pregnant after leaving school.[50]

CHILD OUTCOMES

Having traversed known teen parent inputs, we move to child outcomes. Some relate to the general child population only.

Infant mortality

Infant mortality relates to the deaths of infants under one year of age. In 2010 mothers aged under 20 years had the highest rate of infant deaths (10.0 deaths per 1000 live births).[51]

The disparity has persisted. According to the 2020 Child Poverty Monitor, "Compared with infants born to mothers aged 30–34 years, the mortality rate for infants born to mothers aged younger than 20 years was almost three times as high…"[52]

Perinatal related deaths

Perinatal related deaths of babies are those which occur between 20 weeks of pregnancy and 27 days of age. These deaths include stillbirths. The following excerpts and data are taken from Perinatal and Maternal Mortality Reports which began in 2008. The first lays out advice to Lead Maternity Carers (LMCs):

Teenage mothers (less than 20 years old)

a. All LMCs should be aware that teenage mothers are at increased risk of stillbirth and neonatal death due to preterm birth, fetal growth restriction and perinatal infection.

b. Maternity services for teenage mothers need to address this increased risk by the provision of services that specifically meet their needs, paying attention to:

- commencing maternity care before 10 weeks
- smoking cessation, prevention of preterm birth (including smoking cessation, sexually transmitted infection screening and treatment, urinary tract infection screening and treatment) and screening for fetal growth restriction using regular fundal height measurement on customised growth charts
- providing appropriate antenatal education.

c. Research on the best model of care for teenage pregnant mothers in New Zealand should be undertaken with a view to reducing stillbirth and neonatal death.

d. Engagement with the Ministry of Education is required regarding appropriate education and maternity care in the school setting.

Source: Perinatal and Maternal Mortality in New Zealand 2008

In 2008, "eleven percent of perinatal-related deaths occurred among teen mothers whereas there were only 8% of mothers in that age group."[53] There is, "A consistent association between maternal age and perinatal related mortality" in New Zealand with the "highest rates at the extremes of age."[54]

In 2013 it was reported that:

"There has been an increase in the rate of perinatal death among teen mothers (mothers under 20 years old). In 2013, 3436 teen mothers gave birth, one-third fewer than the 5091 in 2007. A higher proportion of teen mothers in 2013 were Pacific than in 2007, and more were living with socioeconomic deprivation. Both of these factors are associated with increased risk of perinatal death and so may explain some of the increase in the perinatal death rate among young mothers. Analyses reported in the PMMRC report last year showed that young age is not directly associated with perinatal related death. Young age is associated with higher risk of perinatal death because teen mothers are more likely to be having their first baby, to smoke, to be overweight and to live with socioeconomic deprivation."[55]

Young age is associated with higher risk of perinatal death because teen mothers are more likely to be having their first baby, to smoke, to be overweight and to live with socioeconomic deprivation.

PMMRC 2013

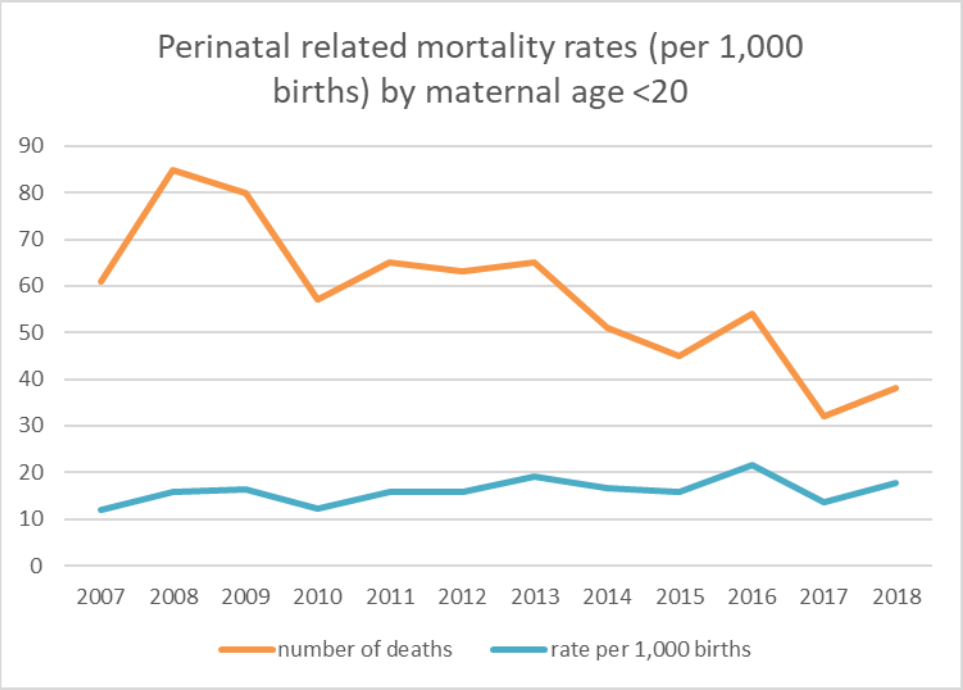
(Conversely a very large retrospective population-based United States study published in 2007 found:

"Teenage pregnancy increases the risk of adverse birth outcomes that is independent of important known confounders. This finding challenges the accepted opinion that adverse birth outcome associated with teenage pregnancy is attributable to low socioeconomic status, inadequate prenatal care and inadequate weight gain during pregnancy."[56])

By 2017 a "significant reduction in stillbirths at 37–40 weeks from 2007 to 2015" was being reported. "Possible explanations for the observed reduction in perinatal mortality include reduced births among teenage women."[57]

However, by 2019 the observation was more nuanced. "Over the past 11 years there has been little change in perinatal related mortality rates by maternal age group. There is **some evidence of an increase in deaths of babies born to mothers younger than 20 years**, and no evidence of any substantial change in any other age group."[58] (emphasis added)

In summary the number of perinatal related deaths is reducing as fewer teens give birth but the perinatal related mortality rate for teen births is not declining and may even be increasing.

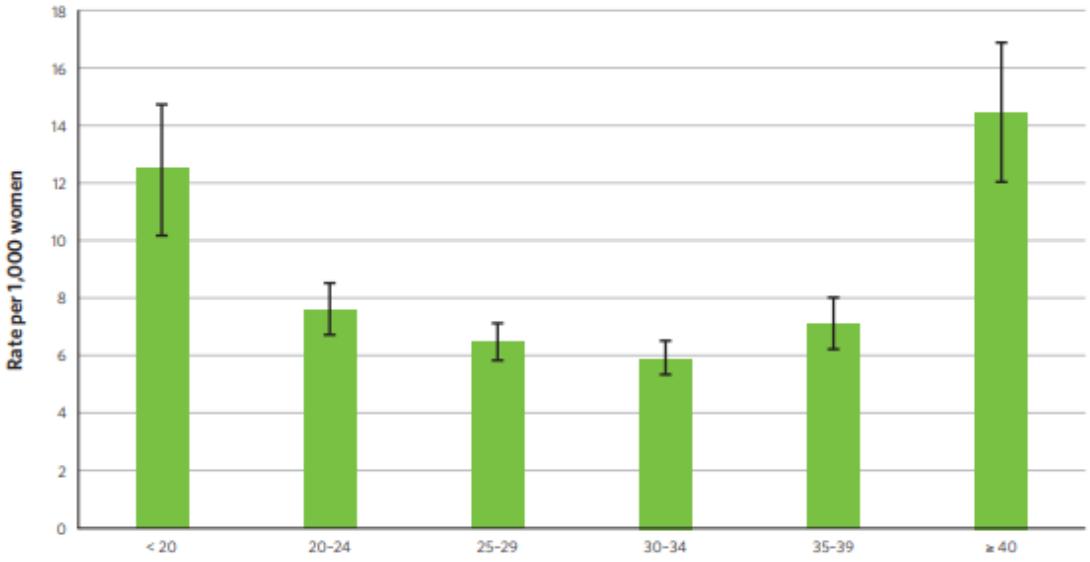


Data source: Fourteenth Annual Report of the Perinatal and Maternal Mortality Review Committee

The 2019 report specifically notes, "Perinatal infection particularly affected mothers under 20 years of age… The rate of antepartum haemorrhage was highest in mothers under 20 years of age … The rates of deaths classified as due to spontaneous preterm and fetal growth restriction were higher in mothers under 20 years of age."[59]

The final graph in this section shows the relatively high rate of teen mother admission to either an Intensive Care or High Dependency Unit.

Rate per 1,000 women giving birth with an HDU or ICU notification, by age, Aotearoa New Zealand, 1 September 2017 to 31 August 2018



Source: Maternal Morbidity Working Group Annual Report, 1 September 2017 to 31 August 2018

SUDI

Sudden Unexplained Death of an Infant (SUDI) less than one year old is associated with low birth weight, smoking, breastfeeding and sleeping habits.

Between 2004 and 2008 SUDI rates were highest among mothers aged under 20 years, followed by those aged 20 to 24 years.[60] Again the disparity has persisted.

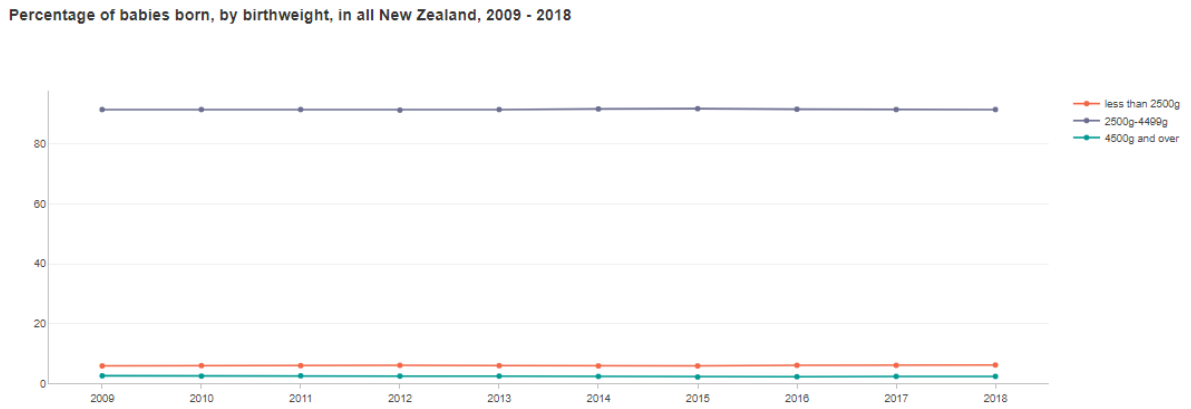
The 2020 Child Poverty Monitor reported, "The SUDI rate for infants born to mothers aged under 20 years was six times as high as the rate for infants born to mothers aged 30 years or older, while for those born to mothers aged 20–25 years it was four times as high."[61]

In 2019, at least 52 babies died from SUDI - 24 percent more than the average between 2013 and 2017 of 42 deaths a year. According to Radio New Zealand, which acquired the data under the Official Information Act, "A death is only confirmed once the coroner rules the cause of death, which can take years, and this number may change."[62] No information regarding maternal age was provided, but nearly 70 percent of the babies were Māori which would be consistent with a persistent high rate in under twenty-year-old mothers.

Birth weight

In 2009 5.9% of new-borns weighed less than 2,500g. In 2018 the percentage had increased slightly to 6.2%. Teen births are more likely to produce lower weight babies with the average birth weight being lower than the overall median (3.34kg compared to 3.41kg).[63] There is however another group of mothers also more prone to birth babies of low birth weight – mothers aged over 40. A rise in over 40s fertility has coincided with the fall in teen fertility and may be sustaining the rather steady % of low weight babies.

Percentage of babies born, by birth weight, in all New Zealand, 2009 - 2018



Source: Report on maternity webtool, Ministry of Health

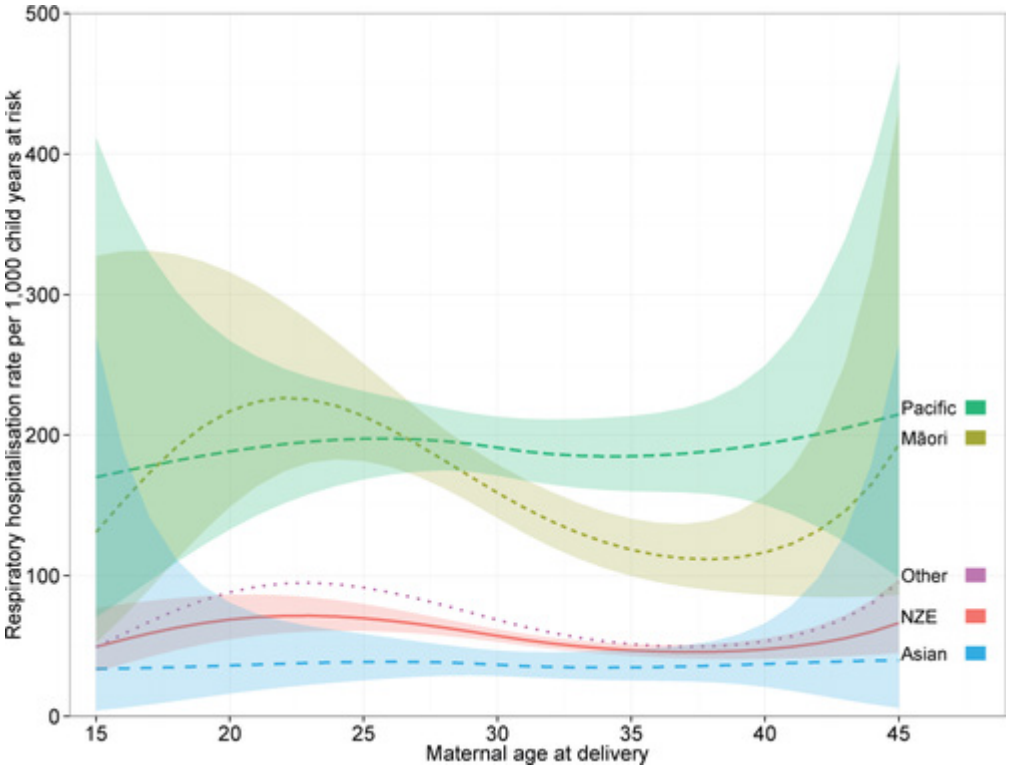
Hospitalisations

DHBs do not routinely collect data relating to maternal age of child admissions. According to Ministry of Health Data Management Services, "There is no National Standard or Guideline for recording that data. It is up to the individual Facilities/Organisations as to what information they do or do not request from a mother/caregiver when a child is admitted."[64]

Perinatal data was collected for almost 600,000 babies born in New South Wales 2001-2007 and linked to hospital admission data. Findings included: "Infants born <39 weeks gestational age, to adolescent mothers, mothers who smoke, are not married, or had a planned delivery also have an increased risk of multiple admissions."[65]

A cohort analysis of New Zealand public hospital maternal data linked to infant data (54,980 births 1995–2009) focused on respiratory admissions produced the following graph and commentary: "After adjustment for risk factors, respiratory hospitalisations remained highest among infants of young Māori women at age 22.5 years and Pacific women across all maternal age groups, compared with infants of European women."[66]

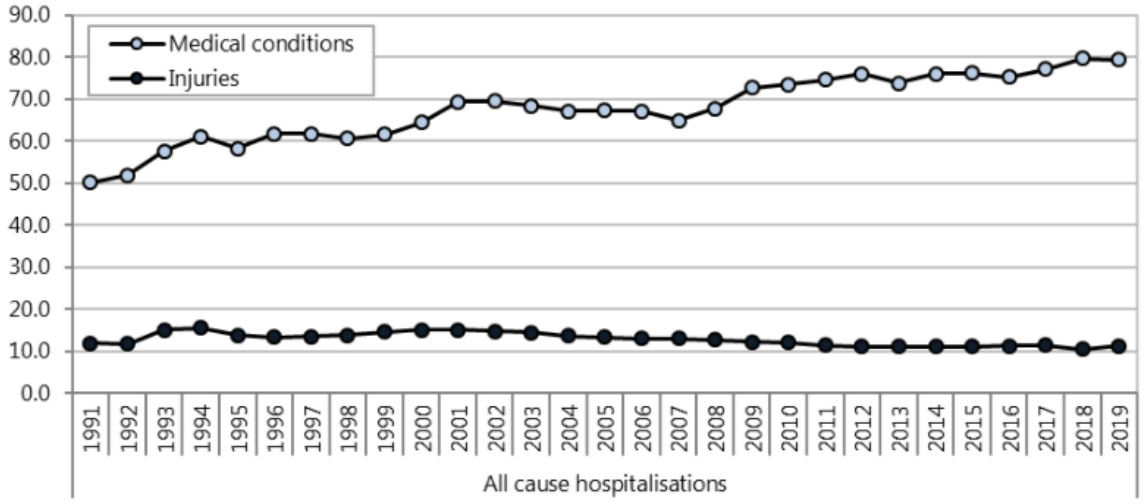
Unadjusted rates of infant respiratory hospitalisation by maternal ethnicity and age



Source: Exploring the maternal and infant continuum – ethnic disparities in infant hospital admissions for respiratory disease

The following data pertains to hospitalisations for medical conditions and injury in the general child population. For medical conditions, the rate is trending up; for injury, the rate is steady over the past decade:

All-cause hospitalisations in 0–14 year olds (excluding neonates), New Zealand 1991–2019



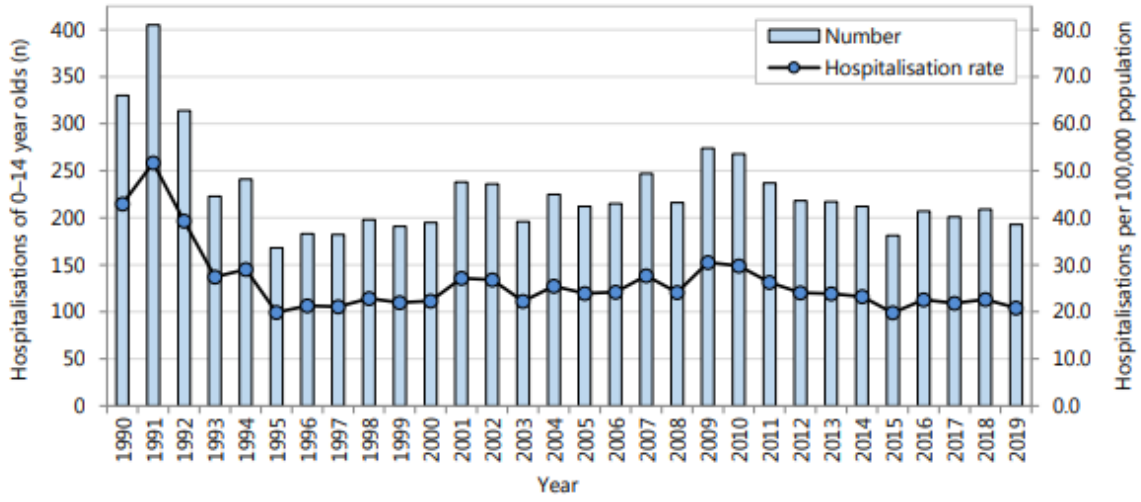
Source: Child Poverty Monitor 2020 Technical Report, Dunedin, NZ Child and Youth Epidemiology Service, University of Otago

A 2021 study into child injury using GUiNZ data found, "…there was a significant age difference between mothers of children at each level of the injury index with mothers of those in the high risk group being significantly younger than mothers of children with no injury and mothers of children in the low risk group."[67] High risk = 1-3 injuries with a hospitalisation or ≥4 injuries. "Younger" was not further qualified but a referenced Swedish longitudinal study showed, "Maternal age is an important determinant of injuries in pre-school children in Sweden and the children of teenage mothers are at particular risk."[68]

Despite this association, no marked improvement in hospitalisation due to injury is evident.

Hospitalisations due to assault, maltreatment and neglect injuries are however showing a positive (though somewhat mixed) trend since 2009.

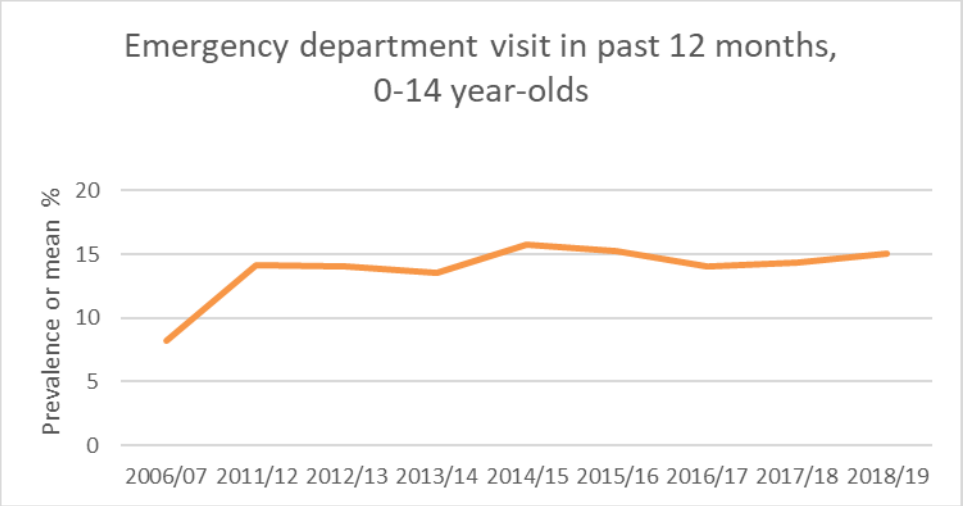
Hospitalisations due to injuries arising from assault, neglect, or maltreatment in 0–14-year-olds, by year, New Zealand 1990–2019



Source: Child Poverty Monitor 2020 Technical Report, Dunedin, NZ Child and Youth Epidemiology Service, University of Otago

Oranga Tamariki also reports on hospital discharges: "The rate of children discharged from hospital due to assault has declined from 43 per 100,000 in 2009 to 22 per 100,000 in 2018."[69]

Visits to hospital emergency departments (which may not require a hospitalisation) are fairly steady but up since 2006/07:

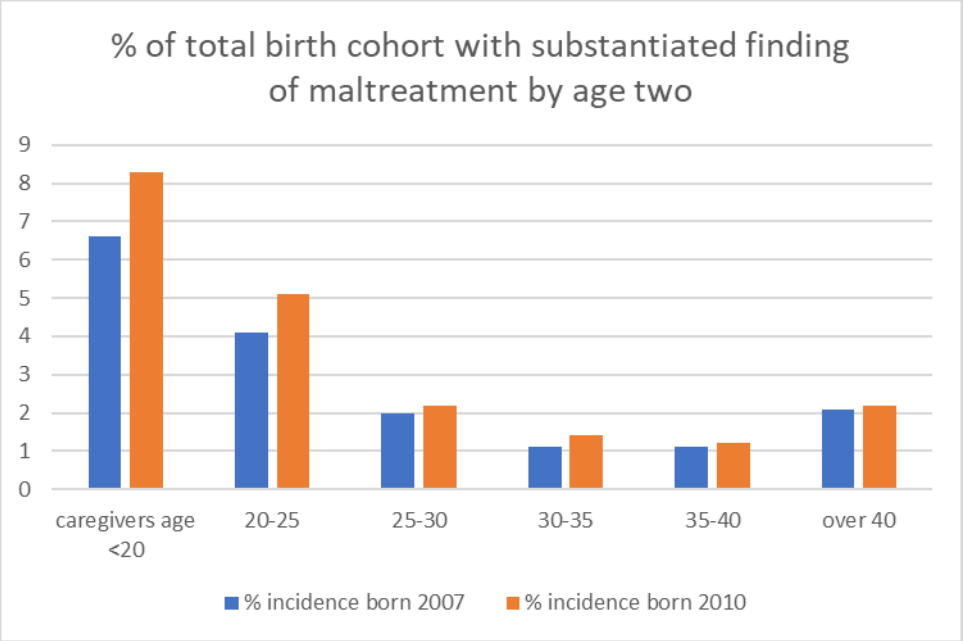


Data source: Ministry of Health, Annual Data Explorer, Children Topic: Emergency department use

Maltreatment

Published in 2021, research from the 40-year Christchurch Health and Development Study found those parents most likely to use physical punishment against their children were younger, caring for more children and in a violent relationship.[70]

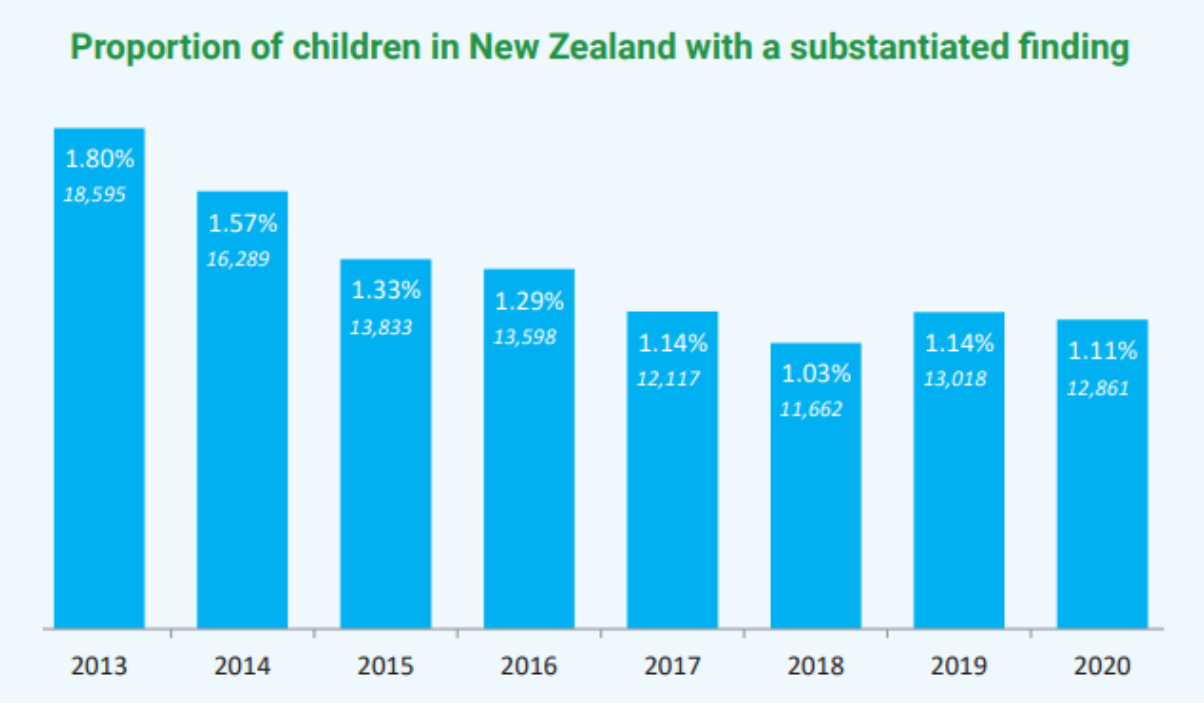
This is supported by analysis of (then) CYF data. Children of teen mothers are significantly more likely to have a substantiated finding of maltreatment by age 2:



Data source: The feasibility of using predictive risk modelling to identify new-born children who are high priority for preventive services - companion technical report, MSD, 2014.

Between 2007 and 2010 the incidence rose, as it did with other age groups though more steeply.

Overall, since 2013, substantiated findings in the general population have reduced with fluctuation between 2017 and 2020:



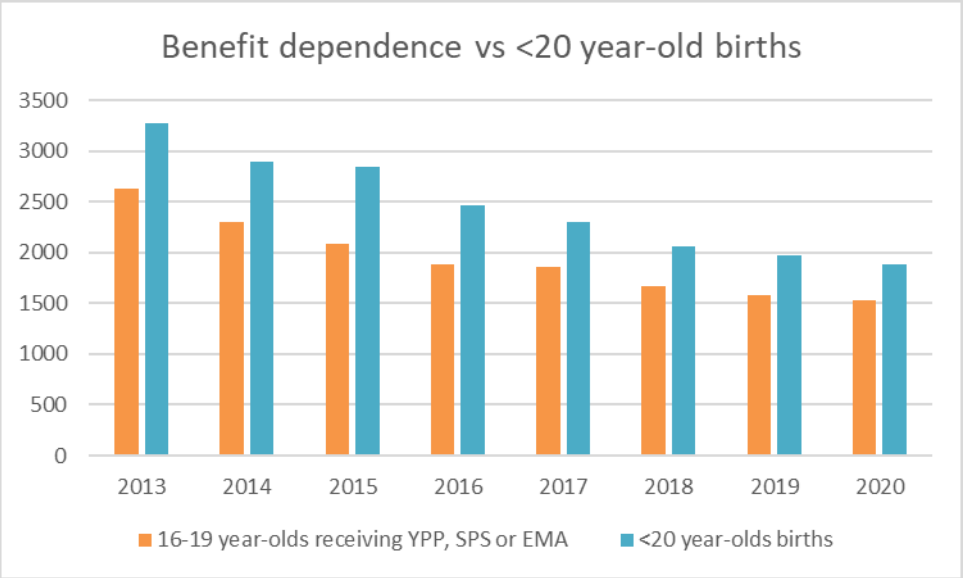
Source: At a glance: Prevalence of harm to children in New Zealand, Oranga Tamariki, Ministry for Children

Welfare dependence

A teen parent – along with her child/children - spends an average of 17.5 years reliant on a benefit. Around 78 percent of teen parents (mostly mothers) were receiving a benefit in 2010.[71] By 2020, the gap between teen births and dependence on a benefit had narrowed slightly.[72]

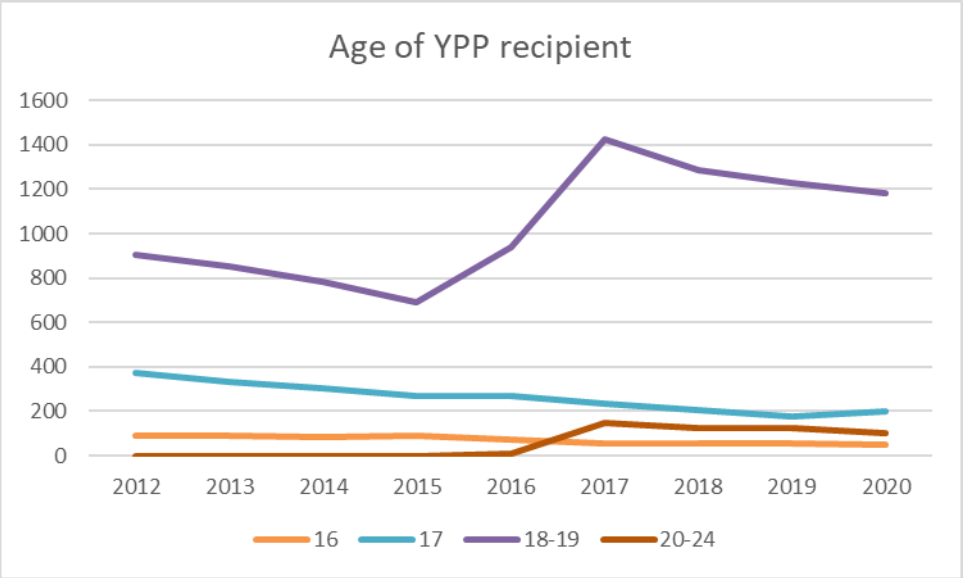
The Young Parent Payment (YPP) was introduced in 2012. Youth Services were established which sought to improve outcomes by administering the YPP, managing rent and utility payments directly while controlling available cash (money management) and requiring recipients to remain in education or other activity as a condition of being on YPP.

The following graph depicts 16–19-year-old dependence on either a YPP, Sole Parent Support (SPS) or Emergency Maintenance Allowance (EMA) benefits and annual births to <20-year-olds, between 2013 and 2020:



Data Source: OIA response from MSD, 11 March/12 April 2021

In 2016 the eligibility age for SPS rose to twenty which is reflected by a sharp increase in YPP uptake by 18–19-year-olds below:

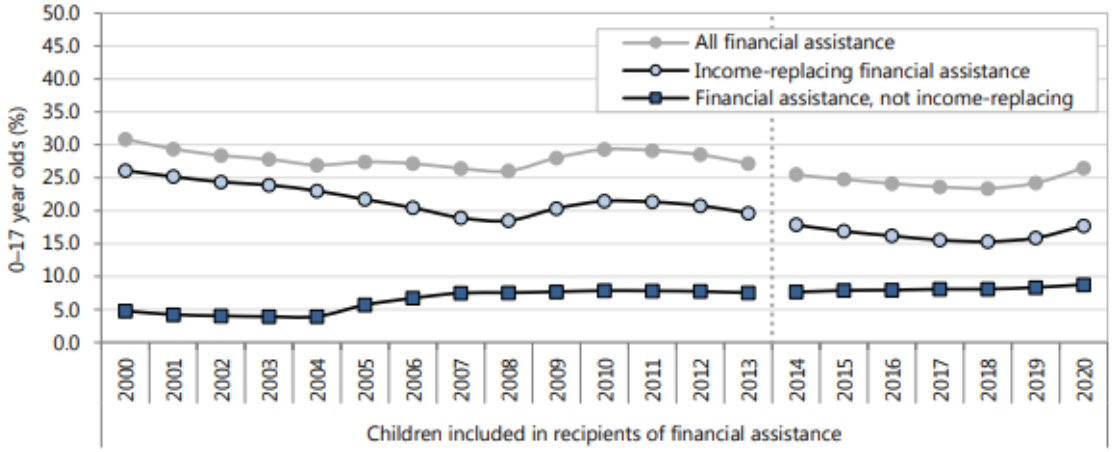


Data Source: OIA response from MSD, 11 March 2021

The number of teen parents that is welfare dependent has fallen but the rate of dependency has increased slightly. An actuarial report prepared for MSD in 2015 found those reliant on the YPP "have the highest average lifetime cost of any client segment."[73]

Trend in the general child population shows 'Income-replacing financial assistance' (a euphemism for 'benefits') tracing a downward trajectory interrupted by the Global Financial Crisis and rising again from 2018. The percentage of children reliant on a benefit in 2020 was very similar to the portion reliant in 2008.

Children aged 0–17 years included in recipients of financial assistance, by assistance category, New Zealand as at end of June 2000–2020



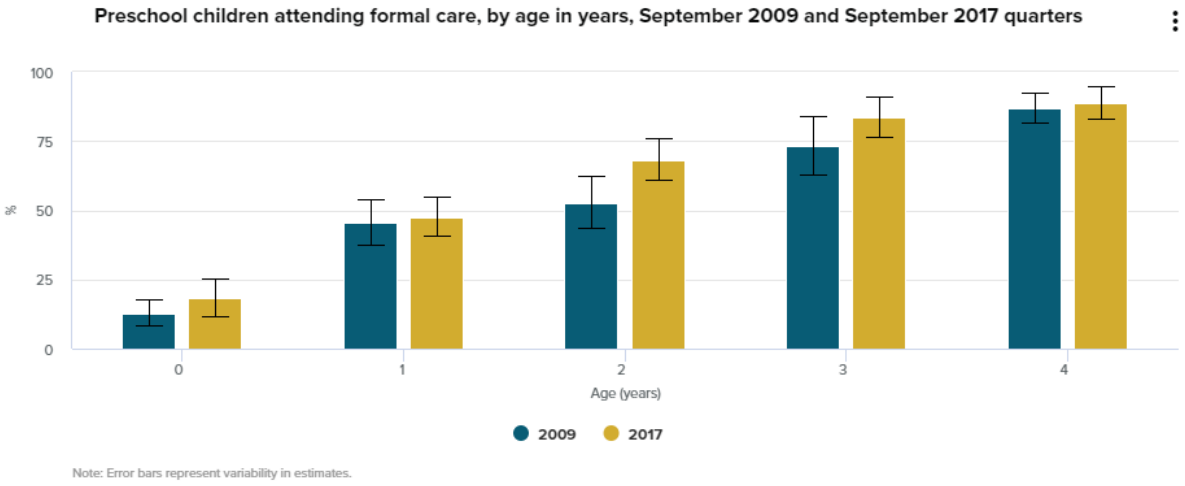
Source: Child Poverty Monitor 2020 Technical Report, Dunedin, NZ Child and Youth Epidemiology Service, University of Otago (Note: Some benefits prior to June 2013 are not directly comparable benefits from June 2014.)

Cognitive achievement

According to data from England, "At age 5, children of teenage mothers are 4 months behind on spatial ability, 7 months behind on non-verbal ability and 11 months behind on verbal ability."[74] Equivalent NZ data is not readily available.

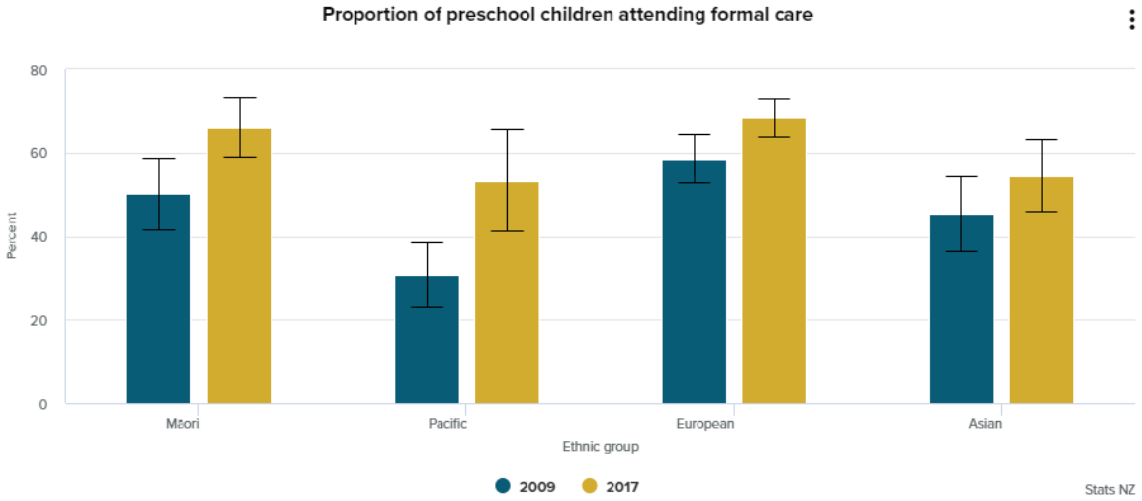
ECE attendance

However, a consensus exists that most early education programmes have positive effects on cognitive development.[75] Using ECE attendance as a loose (and possibly unsatisfactory) proxy for cognitive development, Statistics New Zealand data show an increase between 2009 and 2017.



Source: Statistics NZ, Use of childcare by Māori and Pacific children takes off

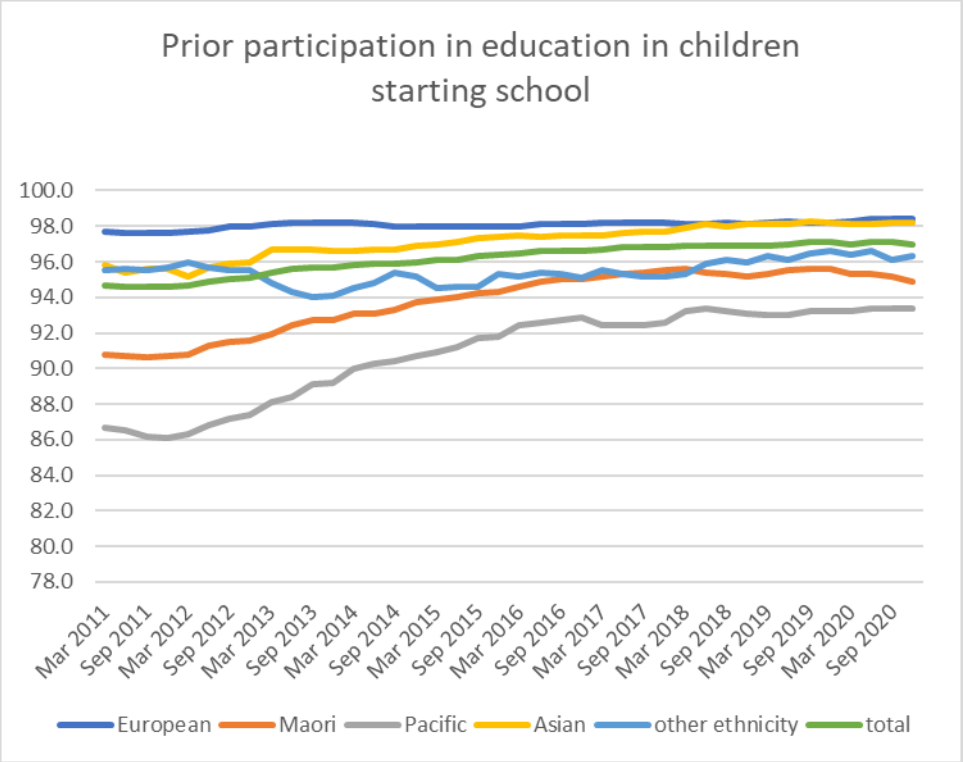
Attendance for Māori (and Pacific) children has increased at a faster rate which also co-occurs with the Māori teen birth rate falling faster.



Source: Statistics NZ, Use of childcare by Māori and Pacific children takes off

The Ministry of Justice maintains: "Early childhood education is an effective way of boosting the cognitive and academic skills of children prior to formal education. There is clear international evidence that high-quality early childhood education reduces the likelihood of future criminal behaviour and other negative social outcomes for disadvantaged children."[76]

More recent Ministry of Education data shows reasonably steady rates since 2017 with a small decline for Māori:



Data source: Education Counts, Attendance

School readiness

A 2020 GUiNZ study used the acronym ACE to describe Adverse Childhood Experiences. These include events that are experienced "... by both the child and mother and include exposure to maltreatment, witnessing violence, living with household members with mental illness, those who abuse substances, have a history of incarceration, or have experienced parental divorce."

In researching 'readiness for school', a major finding was, "…ACEs are more common in children of teen mothers compared to children of non-teen mothers. In children born to teen mothers, 42.9% had two or more ACEs at 54 months compared to 16.4% with two or more ACEs at 54 months in children born to non-teen mothers. We find that at all levels of ACE exposure, children born to teen mothers have less favourable performance on school readiness examinations."[77]

This data relates to the children of the 2009/10 birth cohort and is point-in-time only.

Exposure to ACE in Study Population by the 54-Month Interview, GUINZ sample from 2009-2015 n = 5,562

	Age of Mother at Birth Percentage and Number with ACE			
Adverse Childhood Experience (ACE)	**Less than 18 (n=104)**	**18-19 (n=197)**	**20-21 (n=259)**	**>21 (n=5,002)**
Child Emotional Abuse Indicator	29.8% (31)	33.0% (65)	35.1% (91)	20.1% (1,007)
Child Physical Abuse Indicator	32.7% (34)	40.1% (79)	25.1% (65)	17.7% (883)
Parent Separation or Divorce Indicator	26.9% (28)	25.9% (51)	22.8% (59)	8.6% (431)
Depression Indicator	15.4% (16)	20.8% (44)	16.2% (42)	7.1% (354)
Illegal Street Drugs Use Indicator	17.3% (18)	13.2% (26)	8.9% (23)	3.6% (182)
Problem Drinker or Alcoholic Indicator	9.6% (10)	9.1% (18)	6.2% (16)	3.8% (191)
Intimate Violence Indicator	*	6.6% (13)	8.1% (21)	2.4% (118)
Conviction and Jail Time Indicator	*	*	0.0% (0)	0.2% (13)
Total Adverse Childhood Experiences				
0	30.8% (32)	30.5% (60)	32.8% (85)	57.6% (2,879)
1	30.8% (32)	24.4% (48)	31.3% (81)	27.0% (1,351)
2	16.4% (17)	21.8% (43)	21.6% (56)	11.0% (548)
3	15.4% (16)	16.8% (33)	9.7% (25)	3.5% (176)
4 or more	*	6.6% (13)	4.6% (12)	1.0% (48)

* Suppressed due to low count.

Source: Adversities of Childhood Experience and School Readiness, Focus on children born to teen and non teen mothers in the Growing Up in New Zealand data, December 2020

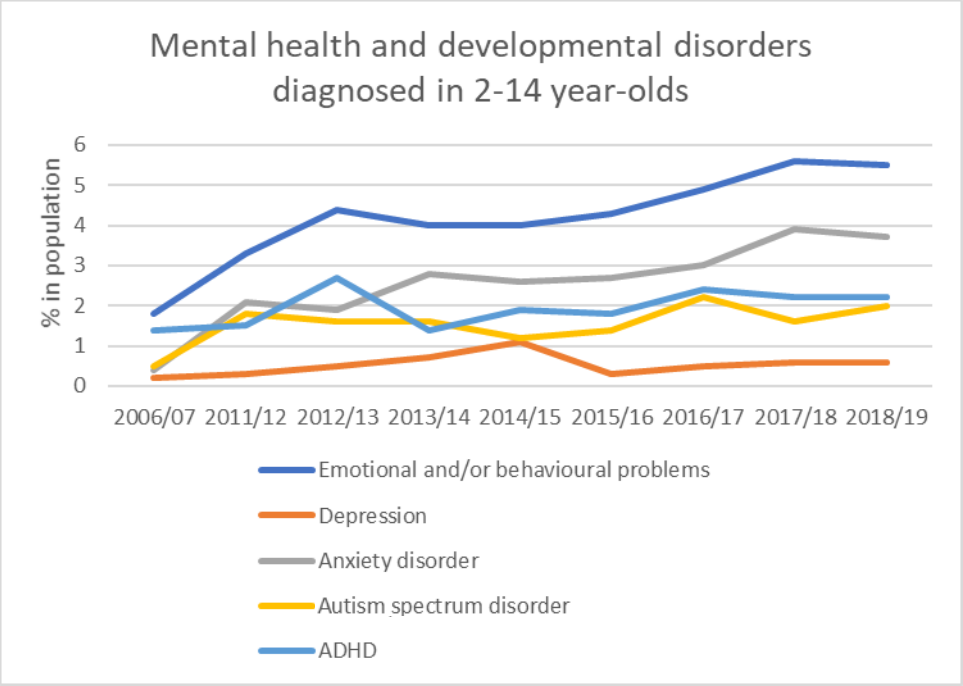
The risk of experiencing 3 adverse experiences is 16.3% for <20-year-old mothers compared to 3.5 percent for mothers >21. It is noteworthy that risks for 20–21-year-old mothers are also considerably higher than those older. Work of further interest would establish how many were initially teen parents with subsequent births.

Child mental health

B4 School Checks has been operating in New Zealand since 2008.

In 2019 analysts described the programme thus: "The B4SC provides an overview of the physical and psychosocial development of children aged four years in New Zealand. Less than 5% of children had abnormal scores in assessments that measure neurodevelopment…"[78]

This is consistent with Ministry of Health data reporting emotional and/or behavioural problems at between 5 and 6 percent of children in 2018/19 – up from under 2 percent in 2006/07:



Data source: Ministry of Health, Annual Data Explorer, Children Topic: Mental health and developmental disorders

The incidence patterns are mixed, but every condition reported has a higher incidence at 2018/19 (which could of course indicate greater diagnosis as opposed to increased incidence.) Again, no information about maternal age is available.

CONCLUSION

The question, 'Is it time to stop worrying about the teenage birth rate?' has been addressed. Coincidental to decline since 2008, improvements are found - fewer maltreatment substantiations; declining hospitalisations for assault, maltreatment and neglect injuries; and higher pre-school attendance (which could indicate greater cognitive achievement). But there are also coincidental worsening outcomes: higher child hospitalisation rates for medical reasons and increasing child mental health and behavioural problems. In the absence of maternal age-specific data these developments cannot be labelled anything more than coincidental.

When young females delay first births, their own life opportunities increase.

Inferences drawn from general child outcome trends, which are influenced by multiple factors - the state of the economy, parental employment, size of family, etc. - are indeterminate.

Some inferences about inputs appear sound, however. For instance, it is incongruous that the mental health of teen mothers would be improving against a backdrop of generally declining teen mental health. It is also highly unlikely that the teen breastfeeding rate has improved while the general breastfeeding rate declines. As a growing proportion of teen mothers enrols in a teen parent unit it might be assumed maternal education is improving. It remains the case however that most do not enrol.

Significantly, other worrying findings are supported by data. The disproportionate perinatal mortality rate for teen mothers remains tragically and unacceptably high, and possibly rising; teen mother obesity, which increases risk of pregnancy and birth complications, is rising; a greater concentration of teen parents live in the highest deprivation quintile and dependency on benefits remains stubbornly high.

Certain input statistics are open to interpretation. Receipt of a Young Parent Payment may be viewed as positive if it indicates the mother is connected to a Youth Service Provider and not socially isolated. It can also be viewed as negative if indicating the mother does not have the financial support of a partner or family.

While maltreatment stats look positive, perennially there are question marks over child protection data which is subject to changes in policy and procedure. Countering this, hospitalisations are immutable.

Teen mothers and their children can be hard to keep tabs on as demonstrated by drop-out from the GUiNZ cohort. At the data collection wave when children transitioned to school, "there was significant bias in the mothers who did not participate. Non-participant mothers (16% of all mothers) were more likely to have been teenagers when their cohort child was born, lived in areas of high deprivation during their child's preschool period, not completed any formal educational qualifications, and be more likely to identify as either Māori, Pacific or Asian than as New Zealand European."[79]

This is indicative of families 'falling through the cracks.' About those children who present the greatest concern, we know the least.

What we do know is when young females delay first births, their own life opportunities increase. Becoming mothers with risk-taking years behind them, having completed their education and/or acquired work skills, established economic and relationship stability, makes a world of difference to their own lives and their children's.

A continuing decline in the teenage birth rate should be actively encouraged and welcomed. There is no margin for complacency.

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ENDNOTES

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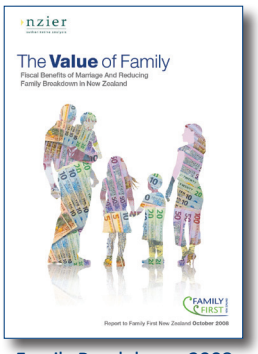
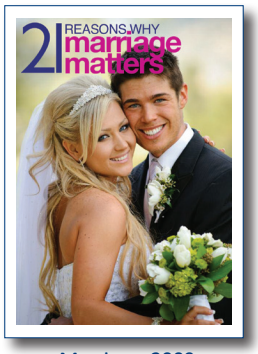
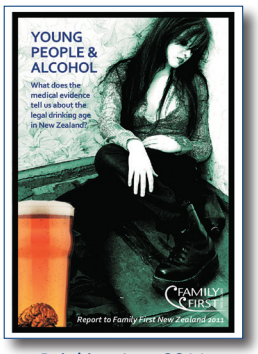


Family Breakdown: 2008

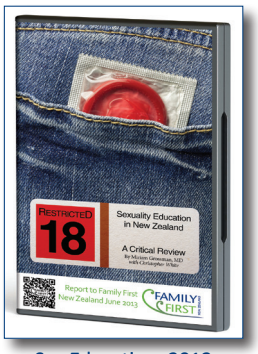


Marriage: 2009

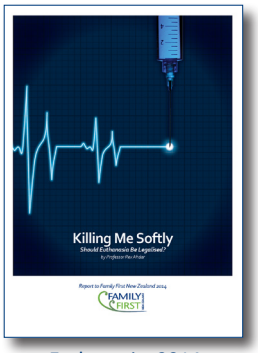


Drinking Age: 2011

Daycare: 2012

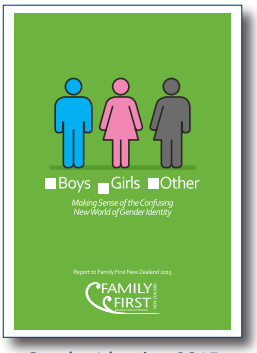


Sex Education: 2013

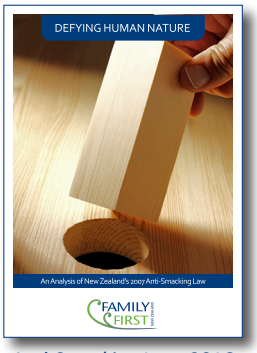


Euthanasia: 2014

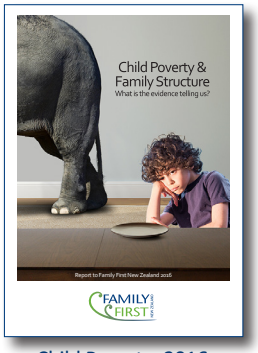
Screentime: 2015



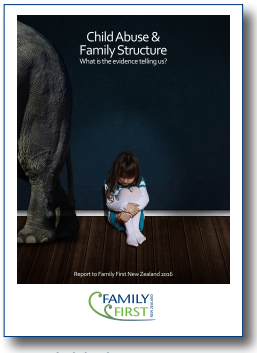
Gender Identity: 2015



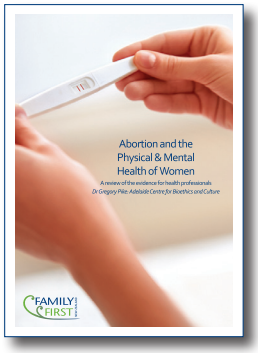
Anti-Smacking Law: 2016



Child Poverty: 2016

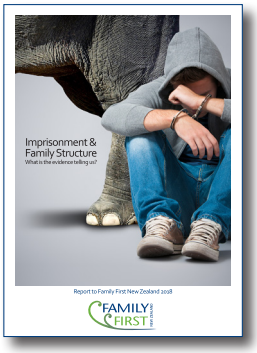


Child Abuse: 2016



Abortion & Health: 2018

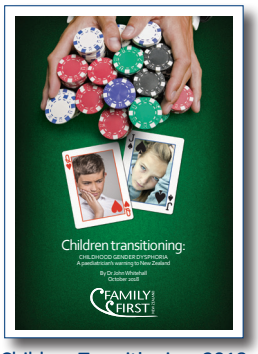
Why Mothers Matter: 2018



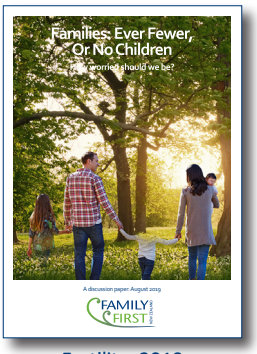
Imprisonment: 2018

Dinner & Family Life: 2018

Why Fathers Matter: 2018



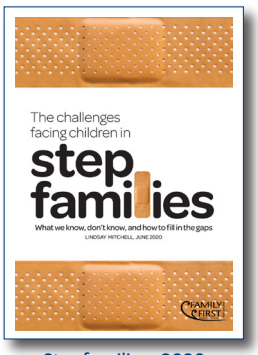
Children Transitioning: 2018



Fertility: 2019

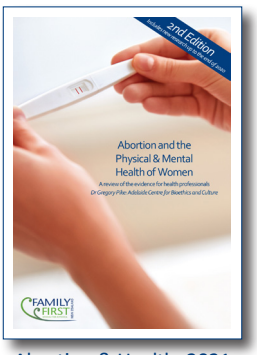
Parent Guide – Gender: 2019

Anti-Smacking Law: 2020

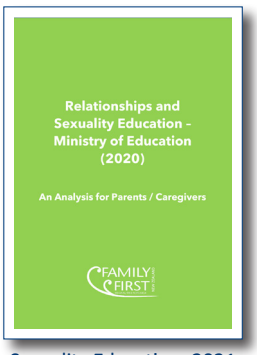


Stepfamilies: 2020

Cannabis Legalisation: 2020
(in conjunction with SAM-NZ)



Abortion & Health: 2021



Sexuality Education: 2021

Available on our website: FamilyFirst.nz