

# Reproductive health: Contraception, conception and change of life - Findings from the Australian Longitudinal Study on Women's Health

**Report prepared for the Australian Government Department of Health**

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## LIST OF ABBREVIATIONS AND ACRONYMS

AIHW	Australian Institute of Health and Welfare
ALSWH	Australian Longitudinal Study on Women’s Health
ART	Assisted Reproductive Technology
BMI	Body Mass Index
CI	Confidence Interval
COVID-19	Corona Virus Disease 2019
CVD	Cardiovascular Disease
EMAS	European Menopause and Andropause Society
GEE	Generalised Estimating Equation
GP	General Practitioner
HR	Hazard Ratio
ICSI	Intracytoplasmic Sperm Injection
InterLACE	Life course Approach to reproductive health and Chronic disease Events
IUD	Intra-Uterine Device
IUI	Intra-Uterine Insemination
IVF	In-Vitro Fertilization
LARC	Long Acting Reversible Contraceptive
MatCH	Mothers and their Children’s Health Study
MBS	Medicare Benefit Schedule
MHT	Menopausal Hormone Therapy
NHMRC	National Health and Medical Research Council
OCP	Oral Contraceptive Pill
OR	Odds Ratio
Pap test/smear	Papanicolaou Test/Smear
PBS	Pharmaceutical Benefits Scheme
PCOS	Polycystic Ovary Syndrome
VMS	Vasomotor Menopausal Symptoms

## **EXECUTIVE SUMMARY**

### **PREVALENCE OF CONTRACEPTIVE USE ACROSS THE LIFESPAN**

- The OCP (including the combined OCP and mini-pill) and condoms are the most common forms of contraception used among women born 1989-95.
- Use of the OCP and condoms is highest when women are in their late teens and early twenties, then declines as they enter their mid- to late twenties.
- Use of the LARC implant, is reported by around 10% of young women, while use of the hormonal IUD increases as women enter their mid- to late twenties.
- There was a reduction in use of contraception as women entered their mid- to late twenties, most likely reflecting the desire to have children.
- Simple prevalence figures on contraception use by women born 1989-95 do not reflect the highly transitional nature of contraception use. Knowing what contraception a woman may be using at a certain age does not mean it is easy to predict which method of contraception she may be using one, two or three years later. Ensuring choices are available for women is essential.
- In the generation of women born 1973-78, the OCP and condoms were the most prevalent contraception used.
- Use of LARC methods (which for the 1973-78 cohort analyses combined the hormonal IUD, copper IUD, implant, injection and vaginal ring) more than doubles as women age, increasing from 10% when first asked (when women were 28 to 33 years) to 24% (when they were 40 to 45 years).

### **SOCIOECONOMIC AND HEALTH BEHAVIOUR VARIATIONS IN THE USE OF CONTRACEPTIVES**

#### **Use of contraception by women in the 1989-95 cohort by socioeconomic factors**

- Women with higher levels of education were more likely to use the OCP and the hormonal IUD, and were less likely to use other contraceptives, and no contraception, compared with women with lower levels of education.
- Women who managed on their available income were more likely to use the OCP, and were less likely to use no contraception, compared with women who found it difficult to manage on their income.

- Women who had never married or were in a de facto relationship were more likely to use the OCP, condoms, the hormonal IUD, and the implant, and were less likely to use no contraception, compared with women who were married.
- Women living in urban areas were more likely to use the OCP, and were less likely to use the implant, hormonal IUD and no contraception compared with women living in remote areas.
- The OCP and the implant were used in higher proportions by women who spoke English. Of interest, use of the OCP was highest in women who spoke an Asian language when they were 40 to 45 years. Women who spoke an Asian or other non-English language were more likely to use condoms, and the implant was also used in higher proportions by women who spoke an Asian language (especially when they were 40 to 45 years). Women who spoke a language other than English were more likely to use no contraception, compared to women who spoke English or an Asian language.

**Use of contraception by women in the 1989-95 cohort by health behaviour factors**

- Women who consumed high levels of alcohol were more likely to use the hormonal IUD and less likely to use no contraception than women who consumed alcohol at a lower level. Women who were low risk drinkers when they were 18 to 23 years had higher use of the OCP. Women who did not drink has less use of the implant and hormonal IUD when they were 40 to 45 years.
- Women who were physically inactive were more likely to use no contraception and less likely to use the OCP than women who were physically active, even at a low level.
- Women with BMI in the overweight or obese categories reported higher rates of implant use, other contraception, or no contraception (at Survey 1), and were less likely to use the OCP, compared with women who were a healthy weight.
- Women who smoked were more likely to use no contraception and were less likely to use the OCP and condoms (used alone or in combination), compared with women who did not currently smoke.
- Women who used marijuana or illicit drugs were more likely to use no contraception and less likely to use the OCP and condoms (used alone or in

combination), compared with women who reported that they did not use marijuana or illicit drugs.

#### **Use of contraception by women in the 1973-78 cohort by socioeconomic factors**

- Women who were married or in a de facto relationship were more likely to use the OCP and condoms (used alone or in combination). Use of LARCs was highest in women who were married or separated/divorced/widowed. Women who had never married or were separated/divorced/widowed were more likely to use condoms or no contraception.
- Women living in urban areas were more likely to use no contraception and less likely to use the OCP and LARCs (at Survey 8), compared with women living in remote areas.
- The OCP was used in higher proportions by women who spoke English, whereas condom use, the withdrawal method, and no contraception were reported in higher proportions by women who spoke a European language. Women who spoke an Asian language had lower use of LARCs.

#### **Use of contraception by women in the 1973-78 cohort by health behaviour factors**

- Women who consumed high levels of alcohol were less likely to use the OCP and no contraception, and were more likely to use condoms, compared with women who consumed lower levels of alcohol.
- Women who were physically inactive reported lower rates of OCP and condom use than women who were active.
- Women with BMI in the overweight or obese categories were more likely to report no use of contraception but were less likely to use the OCP than with women who were a healthy weight. Underweight women at Survey 8 (40 to 45 years) had less use of LARCs.
- Women who smoked were less likely to use no contraception and the OCP than women who reported they did not currently smoke.
- Women who used illicit drugs were less likely to use the withdrawal method and more likely to use no contraception, compared with women who reported they did not use illicit drugs.

## **THE USE OF CONTRACEPTIVES FOLLOWING REPRODUCTIVE EVENTS**

### **Women in the 1989-95 cohort**

- Women who had no children or other reproductive events were more likely to primarily use the OCP and condoms during their twenties.
- Women with one child were more likely to use no contraception than the OCP or condoms when they were aged 19 to 30 years.
- Women with two children were generally equally likely to use the OCP, condoms, or no contraception when they were aged 19 to 30 years.
- Women who had experienced a miscarriage were generally equally likely to use the OCP, condoms, or no contraception between the ages of 18 and 25 years, but were more likely to use no contraception after that.
- Women who had experienced a termination when aged 18-23 years were more likely to report using LARC when they were aged 19-24 years. They had generally higher use of the OCP until they were 25 years, and higher use of condoms across all the surveys. Around 30% of women reported using no contraception when they were 24 to 30 years.

### **Women in the 1973-78 cohort**

- Women who had no children were more likely to primarily use the OCP and condoms until in their mid-thirties when they were then more likely to use no contraception.
- Women with one child were most likely to use the OCP until they were aged 28 to 33 years. After this time, rates of no contraception use increased.
- Women with two children were more likely to use the OCP and condoms until they were 34 to 39 years, after which time, their use of LARC increased. Women in this category were most likely to use no contraception when they were 25 to 30 years.
- Women with three or more children were more likely to not use any contraception until they were 28 to 33 years. After this time, rates of OCP and condom remained the same and use of LARC increased.
- Women who had experienced a miscarriage were generally equally likely to use the OCP, condoms, or no contraception between the ages of 18 and 36 years, and were more likely to use no contraception after this time.

- Women's use of OCP following termination (compared with use following live birth or miscarriage) was higher in all surveys from age 18-23 to 28-33, use of LARC was higher from age 31-36 to 34-39, and use of fertility awareness methods was lower from age 31 onwards.

## **TRENDS IN WOMEN'S USE OF LARC**

- The lifetime prevalence of copper IUDs (27.5%) was higher than for implants (15.3%) in the 1973-78 cohort. However, in the 1989-95 cohort, this trend was reversed, with implants having a greater lifetime prevalence (32.0%) compared to IUDs (19.9%).
- The median age of first implant insertion was 31 years for the 1973-78 cohort, and 20 years for the 1989-95 cohort. This age was considerably younger than the median age of first IUD insertion, which was 37 years for the 1973-78 cohort, and 24 years for the 1989-95 cohort.
- The factor most strongly associated with LARC use (defined as the hormonal IUD, copper IUD or implant) was the number of children women had, with higher odds of LARC use with increasing numbers of children. Similar effects were seen for history of pregnancy (both cohorts) and history of termination (1989-95 cohort).
- Women in the 1989-95 cohort were less likely to use LARC when they had a history of miscarriage.
- Women in the 1989-95 cohort with a history of being in a violent relationship were more likely to use LARC than women who had not been in a violent relationship.

### **Women in the 1989-95 cohort**

- The older women were, the less likely they were to use LARC, particularly implants.
- Women born in non-English speaking countries were less likely to use IUDs, compared to those born in Australia or other English-speaking countries.
- LARC use increased with higher levels of education.
- Unpartnered women were more likely to use LARC than partnered women.

- Women in regional areas were more likely to use implants, compared with women in major cities.
- Women in the underweight BMI category were less likely to use LARC, and women in the obese category were more likely to use LARC, compared with women in healthy weight categories.
- Current smokers were more likely to use LARC than non-smokers.
- Non-drinkers and those who drank rarely were less likely to use LARC, compared to low-risk drinkers.

### **Women in the 1973-78 cohort**

- Country of birth was associated with use of implants, but not IUDs, with women born outside Australia less likely to use implants.
- Non-partnered women were more likely to use implants than partnered women.
- Women in regional and remote areas were more likely to use implants, compared with women in major cities.
- Smokers were less likely to use IUDs, compared to non-smokers.
- Non-drinkers were less likely to use IUDs than low-risk drinkers.

### **SHORT AND LONG TERM USE OF THE OCP**

- For women born 1989-95 and 1973-78, around 50% of OCP use periods involved a single script. Women may have switched to another OCP not listed on the PBS, or may have transitioned to another form of contraception (e.g., LARC), or ceased using contraception.
- One third (35%) of women born 1989-95 only used OCPs for short periods of time (150 days or less).
- Women born 1989-95 who used an OCP in the short-term were more likely to have a certificate/diploma (although similar numbers had a university degree), to be partnered, and to have previously been in a violent relationship than women who used an OCP in the long-term (>150 days).
- Compared to women born 1989-95 who used an OCP in the long-term (>150 days), those who used an OCP in the short-term were more likely to be

psychologically distressed, to have poor to fair general health, to report a chronic condition, and to have had a previous miscarriage or termination.

- Women born 1989-95 who used an OCP for a short period of time were more likely to smoke tobacco, be non-drinkers, and have a slightly higher BMI than women who used OCP for a long period of time (>150 days).
- In the 1973-78 cohort, 38% of women only used OCPs in the short-term (150 days or less).
- Where women used the OCP for longer than 150 days (long-term use), the median length of OCP use was 503 days for women in the 1989-95 cohort, and 575 days for women in the 1973-78 cohort.
- Among women in the 1989-95 cohort who used an OCP in the long-term, duration of OCP use was shorter for women who were older, had a higher BMI, or who smoked or used illicit drugs.
- Among women in the 1973-78 cohort who used an OCP in the long-term, duration of use of OCP was shorter for women who had poorer mental health, did not live in outer regional or remote areas, had been in a violent relationship, or had endometriosis or PCOS.
- PBS data may underestimate OCP use, since not all OCPs are covered by the PBS. However, the difference in OCP users identified through the PBS and those who report OCP use in the ALSWH surveys with no PBS records for OCP use are small. The main differences appear to be that the PBS OCP data may slightly over-represent women who have more children and more socio-economic disadvantage.

## **PATTERNS OF PREGNANCY AND ART**

### **Reproductive outcomes**

- Among women born 1989-95 (aged up to 30 years) who completed one of the two most recent surveys (N = 10,103), 14% have reported giving birth, 7% have reported a miscarriage, and the average birth rate was 1.5.
- Among women born 1973-78 (aged up to 45 years) who completed one of the two most recent surveys (N = 8,149), 81% have reported giving birth, 36% have reported a miscarriage, and the average birth rate was 2.3.

## **Reproductive health problems**

- Among women in the 1989-95 cohort who had completed one of the two most recent surveys, 10% reported endometriosis and 15% reported PCOS.
- Among women in the 1973-78 cohort who had completed one of the two most recent surveys, 12% reported endometriosis and 9% reported PCOS.

## **Pregnancy intentions**

- At the most recent survey when aged 24-30 years, one in ten women from the 1989-95 cohort reported that they were pregnant or trying to conceive.
- Among women from the 1973-78 cohort, one in five women reported that they were pregnant or trying to conceive when aged 28-33 years (Survey 4), compared to 4% when aged 40-45 years at Survey 8 (2018)
- Women who were pregnant reported better health behaviours (higher fruit consumption, less likely to be in the obese BMI category, smoked less) than those who were not pregnant. However, there was no difference in health behaviours between women who were trying to conceive and those who were not trying to conceive.
- Women who were trying to conceive had the highest prevalence of reproductive health problems including endometriosis (1973-78 cohort) and PCOS (1989-95 and 1973-78 cohorts), compared to those who were pregnant or not trying to conceive.

## **Fertility issues**

- At age 24-30, 6% of women born 1989-95 reported fertility issues.
- For women born 1973-78, the percentage ever reporting fertility issues increased from 4% at 22-27 years to 24% at 40-45 years. One in three women who completed one of the two most recent surveys reported fertility issues at some point, and 76% of these had sought help for fertility issues.
- The prevalence of fertility issues was similar at equivalent ages for women born 1989-95 and 1973-78, however, seeking help was more common in the 1973-78 cohort.

## ART

- MBS data indicated 7,137 treatment cycles for 1,537 women (215 from the 1989-95 cohort and 1,322 from the 1973-78 cohort).
- For those women who have accessed ART so far, the number of cycles ranged from 1 to 36 cycles, with an average of 4.6 cycles per woman. Most women (72%) had accessed IVF only, rather than IUI.
- Women born 1989-95 who engaged with ART services early in their reproductive life (aged 17-24) were less likely to have a partner compared to women who engaged ART services later in life.
- Women born 1973-78 who engaged with ART services late in their reproductive life (aged 40-45) were less likely to have a partner than women who engaged ART services earlier in life.
- Women who engaged with ART services late in their reproductive life (aged 40-45; 1973-78 cohort) tended to report that they had not given birth by 40-45 years.
- Overall, the 1989-95 cohort started ART sooner and used it at higher rates when compared to the 1973-78 cohort.
- The prevalence of reproductive health problems was high among women accessing ART services, with 25% of women born 1989-95 and 1973-78 reporting endometriosis, 20% of women born 1973-78 reporting PCOS, and 42% of women born 1989-95 reporting PCOS. Slightly more women with endometriosis used both IVF and IUI, and more women with PCOS used IUI.
- Women who undertook a higher number of ART cycles tended to have endometriosis, had not given birth prior to starting ART treatment, and reported one rather than two or more births across all surveys (note that births cannot be tied to ART).

## **PERINATAL MENTAL HEALTH**

- Rates of screening for perinatal mental health have increased, with 85% of women born 1973-78 reporting being screened in 2009, compared to 91% of women in 2018.
- Women born 1989-95 with no formal qualifications were less likely to report being screened for perinatal mental health issues than those women with higher qualifications.
- Women born 1989-95 have higher rates of perinatal depression and anxiety than women born 1973-78.
- For women born 1989-95 and 1973-78, postnatal diagnoses for depression and anxiety were more common than antenatal diagnoses.
- Among first births, 46% of women born 1989-95 and 37% of women born 1973-78 experienced a traumatic birth (emergency caesarean, labour lasting more than 36 hours, emotional distress during labour, or stillbirth).
- For women born 1989-95 and 1973-78, traumatic birth experiences were associated with an increase in the risk of perinatal depression or anxiety, even after controlling for selected sociodemographic factors and history of mental health issues (OR = 1.74 (95%CI = 1.30, 2.33) and OR = 1.63 (95%CI = 1.40, 1.88), respectively).

## **MENOPAUSE**

### **Natural menopause**

- In the 1946-51 cohort, 90% of women reached natural menopause by age 55, with an average age at 50.9 years. However, 1.3% experienced premature menopause (<40 years), and 5.8% experienced early menopause (40-44 years).
- Women who were less educated, separated/ divorced/ single, reported finding income management difficult all the time and were more likely to have menopause at an earlier age.
- In the 1973-78 cohort, almost 10% of women had reached menopause by age 40-45 years, and 20% had entered perimenopause.

- Cigarette smoking, being underweight, early age at menarche ( $\leq 11$  years), and nulliparity/low parity were associated with an increased risk of premature and early menopause. Smokers who quit smoking for more than ten years prior to the menopause can minimise this risk.
- Women with premature menopause or a very short reproductive lifespan ( $< 30$  years) had an increased risk of non-fatal CVD, especially early onset CVD events before age 60.

### **Hysterectomy and oophorectomy**

- In the 1946-51 cohort, 37.9% of women had a hysterectomy and/or oophorectomy by age 68-73 years – 12.6% reported a hysterectomy with bilateral oophorectomy (surgical menopause). The average age at hysterectomy was 46.3 years, with one third occurring before age 45.
- In the 1973-78 cohort, 5.7% of women had undergone a hysterectomy and/or oophorectomy by age 40-45 years – 0.8% reported a hysterectomy with bilateral oophorectomy.
- Earlier surgical menopause before age 45 poses an additional risk of CVD, compared with natural menopause at the same age.
- Women with hysterectomy/oophorectomy were at a higher risk of type 2 diabetes in both normal weight and overweight/obese groups.
- Hysterectomy with ovarian conservation before age 50 did not increase the risk of all-cause mortality, compared with the no hysterectomy group. However, hysterectomy with bilateral oophorectomy before age 50 and no use of hormone therapy led to an increased risk of premature mortality.

### **VMS**

- In the 1946-51 cohort, almost 25% of women experienced hot flushes often at age 50-58 years, and 5.8% experienced hot flushes often at age 68-73.
- Five symptom profiles of hot flushes were identified throughout the course of over 20 years (45-73 years): minimal (62.2%), later onset, resolved (17.4%), early onset (10.8%), later onset, not resolved (5.9%), and persistent (3.3%). The 'persistent' and 'later onset, not resolved' groups still experienced hot flushes at age 68-73 years. Similar results were found for night sweats.

- Three in four women who experienced hot flushes often sought help at age 45-50, with help seeking decreasing over time to 25% at age 59-64. Of these women, 20-25% reported they were not satisfied with the help given.
- In the 1973-78 cohort, less than 3% of women reported that they experienced hot flushes often at age 37-45 years. However, help-seeking among those women rose from 30.7% at age 37-42 to 41.3% at age 40-45.
- Cigarette smoking, being in overweight/obese BMI categories, and high fat-sugar diet were associated with a higher risk of VMS, while high intakes of soy products, fruit, and Mediterranean diet were associated with a lower risk of VMS. Women who quit smoking before age 40 had a similar level of risk as never smokers.
- Both hot flushes and night sweats were associated with increased risk of CVD, especially those experiencing both symptoms often.

## **MHT**

- In the 1946-51 cohort, the use of MHT peaked at age 50-55 years (32.6%), with 7.3% still taking MHT at age 68-73 years. Among women taking MHT at age 45-50, 52.4% reported a hysterectomy and/or bilateral oophorectomy.
- In the 1973-78 cohort, 1.4% reported currently taking MHT at age 40-45 years. Of these, 40.2% reported a hysterectomy and/or bilateral oophorectomy.

## **FAMILY PLANNING AND USE OF CONTRACEPTIVES DURING THE COVID-19 PANDEMIC**

### **Quantitative findings**

- 10% of women aged 25-31 years changed their pregnancy plans during the pandemic, compared to less than 1% of women aged 42-47 years.
- 11% of women aged 25-31 years were either pregnant or trying to fall pregnant, compared to 2% of women aged 42-47 years.
- 14% of women aged 25-31 years and 3% of women aged 42-47 years indicated that their contraception use had changed since the pandemic began.
- Very few women reported difficulties in accessing contraception during the pandemic.

### **Qualitative findings**

- The pandemic introduced challenges in accessing reproductive health services and adhering to regular contraceptive methods.
- Women described changes to sexual activity during the pandemic, such as having limited opportunities for sexual activity, or a reduced interest in sex.
- Women wrote of limited maternal health service use, economic instability, additional stress, and uncertainty as reasons contributing to their change of mind on pregnancy and having children.

## 1. INTRODUCTION

ALSWH is an ongoing, nation-wide cohort study, investigating factors influencing the health and wellbeing of Australian women. The study began in 1996 and now includes data from more than 57,000 women across four age cohorts (born 1921-26, 1946-51, 1973-78, and 1989-95). ALSWH collects data on women's physical and mental health, as well as demographics, health behaviours, lifestyle factors, social circumstances, and use of health services. In addition, ALSWH data are linked with national and state-based administrative health datasets, such as the MBS, PBS, hospital admission, perinatal, and cancer registry datasets.

In 1996, the 1973-78, 1946-51, and 1921-26 cohorts were randomly selected from the Medicare database and recruited via mailed surveys (Brown et al., 1996; Brown et al., 1998). The three original cohorts were selected in order to follow women through life stages which are critical to women's health and well-being. Sampling from the population was random within each age group, except that women from rural and remote areas were sampled at twice the rate of women in urban areas. This was done so that numbers of women living outside major urban areas were sufficient for statistical comparisons based on location. In 2013, a new cohort of women aged 18-23 (born 1989-95) was recruited using traditional methods (e.g. referral, print and commercial media), social media, and social marketing campaigns (Loxton et al., 2015). More than 17,000 women enrolled in the 1989-95 cohort.

The ALSWH cohorts have been compared with Australian Census data for women of the same age and have been found to be broadly representative of Australian women of the same age, with some over-representation of tertiary educated women and some under-representation of women from non-English speaking backgrounds (Dobson et al., 2015; Mishra et al., 2014; Loxton et al., 2018). For information on retention of the 1946-51, 1973-78, and 1989-95 ALSWH cohorts, see [Appendix 11.1](#).

## 1.1 Report aims

This aims of this report are to:

- Describe the uptake, and factors that are related to the uptake, of different methods of contraception, including in-depth examinations of LARC and OCP use.
- Determine patterns of pregnancy and examine issues related to pregnancy including fertility problems, ART, and perinatal mental health.
- Consolidate and update findings concerning the menopause transition and describe the impact of age at menopause and menopausal symptoms on health outcomes.
- Describe the impact of COVID-19 on family planning and contraceptive choices during 2020.

This report has been prepared in consultation with the Australian Government Department of Health and other stakeholders to focus on key research topics about women's reproductive health.

## 1.2 Women's reproductive history: A snapshot

At the first ALSWH survey in 1996, the majority (91.8%) of women in the 1946-51 cohort (then aged 45-50) reported that they had given birth. Of the women who had reported giving birth (N = 11,953), 9.6% reported one birth only, 41.7% reported two births, 30.8% reported three births, and 17.9% reported giving birth four times or more. For women from the 1946-51 cohort, the average age of menopause was 50.9 years, with 90% of women reporting that menopause occurred when they were 43 to 57 years old. Menopause due to surgery (removal of both ovaries) was indicated by 12% of women.

Of the 14,247 women in the 1973-78 cohort, a total of 19,309 births (including 128 stillbirths) have been reported by 8,627 women to date, giving a birth rate of 2.24 per woman. The average age of women when they first gave birth was 28.7 years (IQR = 25.0 – 32.4). Across all births, the average maternal age was 30.2 years (IQR = 26.7 – 34.1). At Survey 8 in 2018 (when aged 40-45), four out of five women (80.5%) from the 1973-78 cohort had reported giving birth. Half of these women (50.8%) reported

two births, one quarter (24.1%) reported three births, with 16.8% reporting one birth only and 8.3% reporting four or more births. Also at this survey (when aged 40-45), around 15% of women indicated that they had not had a period or any menstrual bleeding for at least 12 months.

Of the 17,010 women in the 1989-95 cohort, a total of 2,776 births (including 31 stillbirths) have been reported by 1,819 women to date, giving a birth rate of 1.5 per woman. The average age of women when they first gave birth was 22.7 (IQR = 20.0 – 26.0). Across all births reported so far, the average maternal age was 23.2 years (IQR = 21.0 – 26.0). At Survey 6 in 2019, 15% of women from the 1989-95 cohort (aged 24-30) had reported giving birth. Just over half of these women (58.4%) reported one birth, nearly a third (31.6%) reported two births, 8.2% reported three births, and 1.8% reported four or more births.

### **1.3 Report outline**

This report examines both cross-sectional and longitudinal data, and reports general trends observed across the 1989-95, 1973-78, and 1946-51 ALSWH cohorts, using both survey data and linked administrative datasets (MBS, PBS, and the state-based perinatal data collections), where appropriate. An outline of each chapter is provided below.

[Chapter 2](#) reports on the prevalence of different contraceptive methods across the reproductive life for women in the 1989-95 and 1973-78 cohorts using survey data. This chapter also explores transitions in use of contraceptive methods for women in the 1989-95 cohort. The sociodemographic and health behaviour variations in contraceptive use are described in [Chapter 3](#), using survey data from the 1989-95 and 1973-78 cohorts.

Reproductive events in relation to contraceptive use are described in [Chapter 4](#), using survey data from the 1989-95 and 1973-78 cohorts. [Chapter 5](#) outlines trends in the use of LARCs (defined as the hormonal IUD, copper IUD and implant). This chapter includes survey data from the 1989-95 and 1973-78 cohorts linked with MBS and PBS data. [Chapter 6](#) examines the long-term use of oral contraceptives, and includes a comparison of trends in use over time and across women born 1973-78 and 1989-95.

This chapter includes analyses of survey data from the 1989-95 and 1973-78 cohorts linked with PBS data.

Patterns of reproductive outcomes, reproductive health problems, pregnancy intentions, fertility problems, and use of ART are described in [Chapter 7](#). This chapter includes survey and linked MBS data from the 1989-95 and 1973-78 cohorts. [Chapter 8](#) describes the prevalence of anxiety and depression in the perinatal period in the 1989-95 and 1973-78 cohorts. This chapter also reports on perinatal mental health screening rates in these two cohorts over time, and experiences of traumatic births.

[Chapter 9](#) reports on experiences of menopause using survey data from the 1973-78 and 1946-51 cohorts. This chapter describes findings on natural menopause, hysterectomy and oophorectomy, VMS, and the use of menopausal hormonal therapy.

Family planning and contraceptive use during the COVID-19 pandemic are explored in [Chapter 10](#) using COVID-19 survey data from the 1989-95 and 1973-78 cohorts. This chapter also includes qualitative analysis of free text comments on reproductive health experiences during the COVID-19 crisis, and the impacts of the pandemic on reproductive health.

This report can be read from beginning to end but you can also dip into each chapter as a stand-alone document.

For information about the prevalence of different types of contraception women have used at different times and ages, see [Chapter 2](#).

If you would like to know more about use of contraception, such as the socioeconomic status or health behaviour of women using different types of contraception, see [Chapter 3](#).

To find out more about the impact of reproductive health events on the uptake of different contraceptives, see [Chapter 4](#).

For an in-depth examination of LARC use, including details of socioeconomic and health behaviour characteristics that are related to LARC use as reported in MBS and PBS data, see [Chapter 5](#).

For a detailed analysis of OCP use as captured by PBS data, and the factors that are related to long-term OCP use, see [Chapter 6](#).

To find information about pregnancy patterns, fertility issues and use of ART, see [Chapter 7](#).

To find out about perinatal mental health, including screening, prevalence and risk factors for ante- and postnatal depression and anxiety, see [Chapter 8](#).

If you would like to know more about menopause, hysterectomy, and menopausal symptoms and their relationship with health outcomes, see [Chapter 9](#).

For information about the impact of the COVID-19 pandemic on women's family planning and contraceptive choices during 2020, including a qualitative analysis of their lived experience, see [Chapter 10](#).

## 1.4 References

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