

Table S1. Maternal demographic and perinatal characteristics for responders and non-responders

Characteristic	Non-responders (N = 1088)	Responders (N = 438)	p
Maternal age at delivery (years)			
Mean (standard deviation)	32.85 (5.34)	33.18 (5.39)	0.29
≥ 35, n (%)	415 (38.1%)	173 (39.5%)	0.64
Body mass index at first antenatal visit (kg/m²)			
Mean (standard deviation)	28.81 (6.88)	28.30 (6.70)	0.20
< 18.5 (<i>underweight</i>)	12 (1.1%)	1 (0.2%)	0.12
18.5 – 24.9 (<i>healthy weight</i>)	315 (29.0%)	155 (35.4%)	
25.0 – 29.9 (<i>overweight</i>)	344 (31.6%)	126 (28.8%)	
30.0 – 34.9 (<i>obese class I</i>)	186 (17.1%)	70 (16.0%)	
35.0 – 39.9 (<i>obese class II</i>)	94 (8.6%)	32 (7.3%)	
> 40.0 (<i>obese class III</i>)	137 (12.6%)	54 (12.3%)	
Missing	64 (5.9%)	27 (6.2%)	
Parity at start of affected pregnancy, n (%)			
Nulliparous	667 (61.3%)	283 (64.6%)	0.26
Multiparous	421 (38.7%)	155 (35.4%)	
Gravidity at start of affected pregnancy, n (%)			
Gravida 1	453 (41.6%)	208 (47.5%)	0.27
Gravida 2+	635 (58.4%)	230 (52.5%)	
Plurality of affected pregnancy, n (%)			
Singleton	1014 (93.2%)	418 (95.4%)	0.06
Twins	74 (6.8%)	20 (4.6%)	
Country of birth, n (%)			
Australia	731 (67.2%)	322 (73.5%)	0.02
Overseas	357 (32.8%)	116 (25.5%)	
Primary spoken language, n (%)			
English	969 (89.1%)	410 (93.6%)	< 0.01
Language other than English	119 (11.0%)	28 (6.4%)	

Indigenous status, n (%)			
<i>Aboriginal and/or Torres Strait Islander</i>	24 (2.2%)	7 (1.6%)	0.55
<i>Neither Aboriginal nor Torres Strait Islander</i>	1064 (97.8%)	431 (98.4%)	
Diabetes status during affected pregnancy, n (%)			
<i>No diabetes</i>	868 (79.8%)	374 (85.4%)	0.07
<i>Gestational diabetes</i>	186 (17.1%)	56 (12.8%)	
<i>Pre-existing type 1 diabetes</i>	17 (1.6%)	5 (1.1%)	
<i>Pre-existing type 2 diabetes</i>	17 (1.6%)	3 (0.7%)	
Smoking status during affected pregnancy, n (%)			
<i>Non-smoker</i>	1023 (94.0%)	430 (98.2%)	< 0.01
<i>Smoker</i>	60 (5.5%)	7 (1.6%)	
<i>Unknown</i>	5 (0.5%)	1 (0.2%)	
Mode of birth (affected pregnancy)			
<i>Unassisted vaginal birth</i>	322 (29.6%)	126 (28.8%)	0.37
<i>Ventouse vaginal birth</i>	55 (5.1%)	22 (5.0%)	
<i>Forceps vaginal birth</i>	82 (7.5%)	24 (5.5%)	
<i>Elective caesarean</i>	194 (17.8%)	69 (15.8%)	
<i>Emergency caesarean</i>	435 (39.4%)	187 (45.0%)	
Gestation (weeks), n (%)			
Singletons (n=1,432)			
<i>< 37 weeks (preterm)</i>	263 (25.9)	129 (30.9)	0.06
<i>≥ 37 weeks (term)</i>	751 (74.1)	289 (69.1)	
Twins (n=93)			
<i>< 37 weeks (preterm)</i>	60 (82.2)	17 (85.0)	1.00
<i>≥ 37 weeks (term)</i>	13 (17.8)	3 (15.0)	

SCN/NICU admission status (following affected pregnancy), n (%)			
Singletons (n=1,432)			0.35
	<i>Yes</i> 425 (41.9)	187 (44.7)	
	<i>No</i> 589 (58.1)	231 (55.3)	
Twins (n=93)			1.00
	<i>Yes – one twin</i> 8 (10.8)	2 (10.0)	
	<i>Yes – both twins</i> 66 (89.2)	18 (90.0)	
	<i>No</i> 0 (0.0)	0 (0.0)	
Infant discharge destination (affected pregnancy), n (%)			
Singletons (n=1,432)			0.43
	<i>Home</i> 894 (88.2)	362 (86.6)	
	<i>Transfer</i> 120 (11.8)	56 (13.4)	
Twins (n=93)			0.91
	<i>Home – both twins</i> 53 (72.6)	14 (70.0)	
	<i>Transfer – both twins</i> 15 (20.6)	5 (25.0)	
	<i>Home – one twin & transfer – one twin</i> 5 (6.9)	1 (5.0)	

Document S2: Complete participant survey questions and possible responses

Participant Survey

Important Information:

The researchers are using REDCap for the collection, aggregation, and analysis of survey data. The information collected in this survey is transmitted and stored securely within Australia and is accessed by the University of Melbourne and Mercy Perinatal researchers in accordance with this privacy statement. You may decline to provide your information by not responding to the survey. This voluntary survey should take about 10 minutes to complete. The survey is mostly made up of 'tick-the-box' questions. We sometimes ask you to provide some more details, depending on your answers. Please answer as honestly as you can - it is important that we get accurate information from your answers. Your answers to this survey are not linked to your name. If you are unsure about any of the answers, please write 'unsure'. If any of these questions cause concern for you, you may contact the researchers on 03 8458 4381 (business hours, Monday to Friday). We will not be able to provide you with any personalised health advice. Alternatively, you may wish to make an appointment to see your regular doctor to discuss your health if you have any specific concerns. Thank you for taking the time to participate in this important study.

Do you consent to participating in this survey? Yes
 No

Today's Date _____

Section 1 - About you, your health and your family's medical history:

What is your date of birth? _____

What is your height? (cm) _____

(cm)

How much do you weigh? (kg) _____

(kg)

Have you ever had any type of diabetes?

- No - No diabetes
 Yes - Gestational diabetes (diabetes during pregnancy)
 Yes - Type 1 diabetes
 Yes - Type 2 diabetes
 Unsure

Year of diagnosis _____

Year of diagnosis _____

Year of diagnosis _____

Have you ever had a close relative* who has had (tick any that apply):

- Heart disease
 A heart attack
 High blood pressure
 A stroke (a bleed or clot in the brain)
 None of the above
 I'm unsure of my family medical history

*A "close relative" is a parent, full sibling, or child who is related to you by blood (i.e. not related to you by marriage or adoption).

Section 2 - About your pregnancy/pregnancies

How many times have you been pregnant?

How many of your pregnancies have been complicated by high blood pressure?

How many children do you have?

- 0
 1
 2
 3
 4
 5
 6
 7
 8
 9
 10

Date of birth of first child:

Date of birth of second child:

Date of birth of third child:

Date of birth of fourth child:

Date of birth of fifth child:

Date of birth of sixth child:

Date of birth of seventh child:

Date of birth of eighth child:

Date of birth of ninth child:

Date of birth of tenth child:

Were any of your children considered small at birth ("small for gestational age")?

- Yes
 No

Were you diagnosed with any of the following during a pregnancy?

(Tick at least one answer)

- Gestational hypertension (high blood pressure during pregnancy, without other problems)
- Pre-eclampsia (high blood pressure, plus other problems, like protein in your urine)
- Other high blood pressure problem (please provide detail)
- None of the above
- Unsure

Please provide detail of other blood pressure problem diagnosed during pregnancy _____

Section 3 - Doctor visits since your most recent child's birth

Since your most recent birth, how many times have you visited a doctor or health clinic to check your blood pressure?

- 0
- 1
- 2
- 3
- 4
- 5+

Since your most recent birth, how many times have you had blood tests to check your blood sugar?

(Names of blood tests might include: fasting glucose, random glucose, oral glucose tolerance test [GTT], HbA1c)

- 0
- 1
- 2
- 3
- 4
- 5+

Since your most recent birth, how many times have you had blood tests to check your cholesterol?

(Names of blood tests might include: lipid profile, lipid panel, LDL, HDL, total cholesterol, triglycerides)

- 0
- 1
- 2
- 3
- 4
- 5+

Since your most recent birth, how many times have you had blood tests to check your kidney function?

(Names of blood tests might include: UEC, or U&EC)

- 0
- 1
- 2
- 3
- 4
- 5+

Section 4 - Your smoking history

Have you ever smoked?

- No
- Yes

Over the last month, how many cigarettes did you smoke each day (on average)?

- 0 - I have quit smoking
- 1-5
- 6-10
- 11-15
- 16-20
- 21-25
- 25+

Did you smoke during your most recent pregnancy?

- Yes
- No

Did you quit (or try to quit) during your most recent pregnancy?

- No
 Yes
 N/A - I had quit prior to pregnancy

Have you quit (or tried to quit) smoking since your youngest child was born?

- No
 Yes
 N/A - I had already quit

Section 5 - Your health after pregnancy

Since your most recent birth, have you had any of the following conditions?

(select one or more)

- Type 2 Diabetes
 Heart failure
 High blood pressure (or "hypertension")
 Heart disease
 Stroke
 Chronic kidney disease
 High cholesterol
 Blood clot in the leg (or a "DVT")
 None of the above

Are you currently taking medications to manage any of the following conditions?

- High blood pressure (or "hypertension")
 Diabetes (any type)
 High cholesterol
 Not taking medication for any of the above reasons

Are you currently taking any medications?

- No current medications
 Yes (please list names of medications below)

Please list names of any current medications:

Are you currently pregnant?

- Yes
 No

What is your due date?

Over the last month, how many times each week did you do 30 minutes or more of exercise (on average)?

- 0 times
 1-2 times
 2-3 times
 3-4 times
 5 or more times

What types of exercise have you done in the last month (for at least 30 minutes at a time)?

(select all that apply)

- Running
 Walking
 Strength training (i.e. weights)
 Yoga/Pilates
 Other (please specify)

Please specify any other types of exercise you have done in the last month (for at least 30 minutes at a time)

Over the last month, how many portions of fruit or vegetables did you eat on a typical day?

- 0 serves
 1-2 serves
 2-3 serves
 3-4 serves
 5 or more serves

Having high blood pressure during a pregnancy can impact on a woman's future health and her risk of certain illnesses later on in her life.

- No, I did not know
 Yes, I am aware of this

Were you aware of this?

If yes, please list the related risks that you know about:

Who has given you information about your future health risks that are linked to having high blood pressure during a pregnancy?

- A Mercy Hospital doctor
 A Mercy Hospital midwife
 My local doctor (GP)
 Another healthcare worker (please specify)
 I found out this information for myself
 I was not already aware of this information

Please specify any other healthcare workers who have given you information about your future health risks that are linked to having high blood pressure during a pregnancy

Would you find it helpful to receive an information sheet/pamphlet about the things that you can do to improve your lifelong health following your experience of high blood pressure during pregnancy?

- No, I would not like to receive this information/I will get this information elsewhere
 Yes, please forward an information sheet on to the following email address

Please note, we are in the process of developing this information sheet. It will be sent out to those who are interested upon its completion during 2021-2022.

Please enter the email address you would like to receive the information sheet/pamphlet:

Document S3: Pregnancy and heart disease – Information and resources for health professionals (Heart Foundation of Australia)¹³



heartfoundation.org.au | Helpline 13 11 12

Pregnancy and heart disease

Information and resources for health professionals.

Cardiovascular disease risk associated with pregnancy has until recent times been poorly acknowledged, researched and understood. However, we now know:

Women who have been diagnosed with either pre-eclampsia or gestational hypertension are at increased risk of subsequent hypertension and cardiovascular disease. The relative risk of chronic hypertension is four times and ischaemic heart disease twice that of women who did not experience these conditions in pregnancy.¹

Hypertensive disorders of pregnancy affect five to ten percent of pregnancies worldwide. In Australia, 30,000 women each year will develop high blood pressure in pregnancy and 10,000 of these will lead to preeclampsia.^{2,3}

Between five and ten percent of pregnant women will develop gestational diabetes, also associated with increased risk of Type 2 Diabetes and cardiovascular disease later in life. AIHW data collected in 2015 suggests that as many as 10.5 percent of Australian women may experience gestational diabetes.⁴

There is currently limited information available for women to understand these vascular conditions, their implications for long-term cardiovascular health and actions they can take to reduce their risk.

Resources for health professionals

CLINICAL MANAGEMENT ADVICE ^

Guidelines and recommendations have been developed for pregnancy care and long-term management of cardiovascular risk in the United States, Europe and Australia.

The following is based on current best practice.

Hypertension in pregnancy and preeclampsia

Clinical follow-up:

1. An annual blood pressure check
2. Regular (five-yearly or more frequently if indicated) assessment of other CV risk factors including serum lipids and blood glucose.¹

Advice for women who have experienced hypertensive disorders of pregnancy:

- Maintain a healthy weight
- Eat a healthy diet
- Engage in regular physical activity
- Don't smoke
- Plan subsequent pregnancies with your obstetrician

Gestational diabetes

Clinical follow-up:

Oral Glucose Tolerance Test six weeks after the birth, then every two to three years (annually if planning subsequent pregnancies).²

Advice for women who have experienced gestational diabetes:

- Maintain weight within a normal range by following a healthy diet.
- Take regular exercise – aim for 30 minutes of brisk walking five times a week.

(1) Lowe et al. *Society of Obstetric Medicine of Australian and New Zealand 2014. Guideline for the Management of Hypertensive Disorders of Pregnancy 2014*. Sydney: SOMANZ.

(2) *Australian Diabetes in Pregnancy Society Consensus Guidelines for the Testing and Diagnosis of Hyperglycaemia in Pregnancy in Australia and New Zealand (modified November 2014)*.

GUIDELINES AND TOOLS

- Lowe et al. *The SOMANZ Guideline for the Management of Hypertensive Disorders of Pregnancy*. Society of Obstetric Medicine of Australian and New Zealand 2014. Sydney: SOMANZ 2014
- NSW Health Policy Directive: PD2011_064. *Maternity - Management of Hypertensive Disorders of Pregnancy*. NSW Health: 2011
- Regitz-Zagrosek et al. *ESC Guidelines on the management of cardiovascular disease in pregnancy*. The Task Force on the Management of Cardiovascular Diseases during Pregnancy of the European Society of Cardiology. *European Heart Journal*. 2011; 32:3147-3197
- Royal Australian College of General Practitioners. *General Practice Management of Type 2 Diabetes*. 2016-2018
- *Australian Diabetes in Pregnancy Society Consensus Guidelines for the Testing and Diagnosis of Hyperglycaemia in Pregnancy in Australia and New Zealand (modified November 2014)*

INFORMATION FOR PATIENTS



- [Video: Preeclampsia explained by experts and women who lived it](#)
- [Video: Sabine shares her experience of preeclampsia during her second pregnancy](#)
- [Video: Learn more about Jo's experience of preeclampsia during both her pregnancies](#)
- [Fact sheet: Gestational diabetes & CVD \(PDF\)](#)
- [Fact sheet: High blood pressure in pregnancy & CVD \(PDF\)](#)