



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

The MAMMI study
(Maternal health And Maternal Morbidity in Ireland)

**Professor Cecily Begley, Dr Déirdre Daly, Assoc. Professor Margaret Carroll,
Professor Mike Clarke, Queen's University Belfast
& the MAMMI Study research team**



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Rotunda Hospital



Antenatal clinic staff



Hazel & staff
(Private & semi-private clinic staff)



Aileen & Ruth,
IT midwives



Medical records staff

The MAMMI Study

Special thanks to

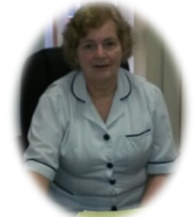
The women taking part The midwives and midwifery students

The IT Midwives

The medical records staff

Administrative and other staff who supported the MAMMI study

Maternity Unit,
Galway University
Hospital
Antenatal clinic staff



Teresa & staff
(Private clinic)



Medical records staff

Coombe Women and Infants
University Hospital



Emma
IT midwife

Sites





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The MAMMI Study

Special thanks to our funders



**Urinary
Incontinence
Strand**



**MAMMI 2
Galway**



**Sexual
Health
Strand**



**Caesarean
Section
Strand**



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**Pelvic Girdle Pain
Strand (PhD student
Stipend)**



**Caesarean
Section
Strand (2013-2016)**



**Diet & Physical
Activity
Strand**

Friends of the
Rotunda Hospital Charity
(CHY 20091)
has changed its name to
The Rotunda Foundation

**Mental Health
(Anxiety)
Strand**



**Interdisciplinary
Capacity
Enhancement 2016**



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

**MAMMI
5-year
Follow-up surveys**

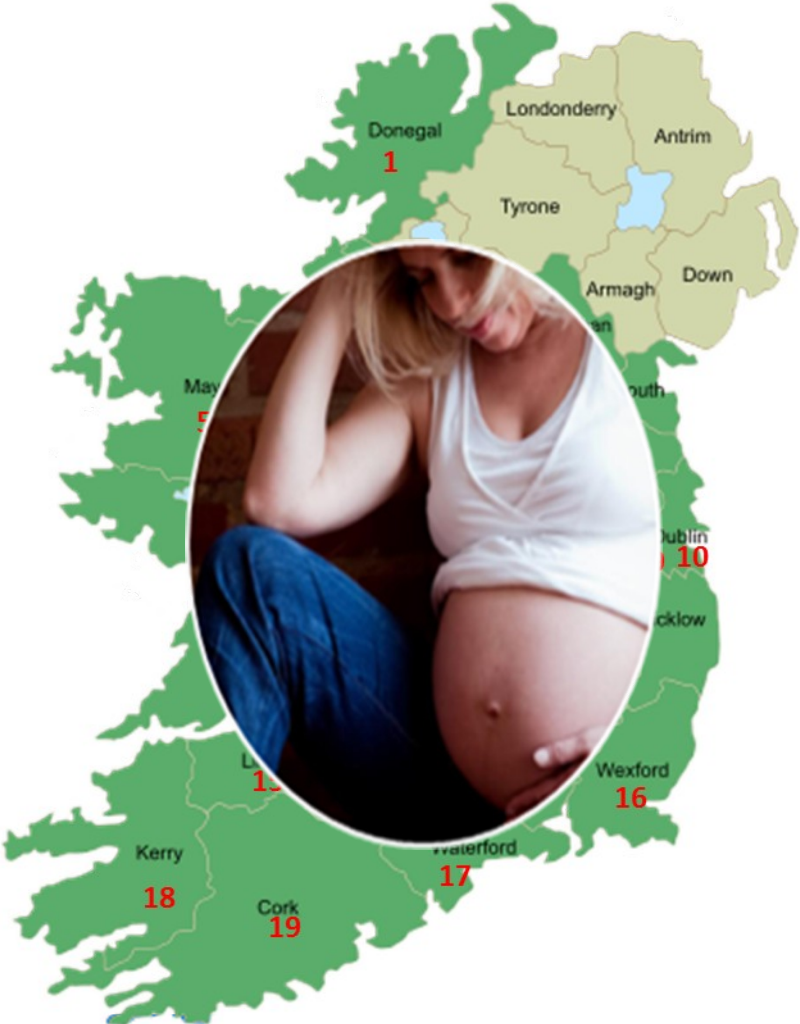


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Women birthing in Ireland

A lot of information is collected and reported during pregnancy, labour & birth





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Women birthing in Ireland

A lot of information is collected and reported during pregnancy, labour & birth

Gaps in the information...

We stop (collecting and) reporting information on women's health after the birth





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Women birthing in Ireland

A lot of information is collected and reported during pregnancy, labour & birth

Gaps in the information...

We stop (collecting and) reporting information on women's health after the birth

Focus moves from woman to baby





Mixed methods design



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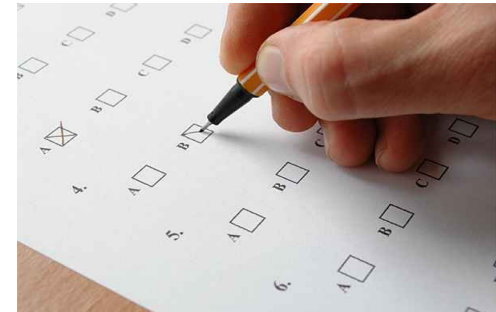
3,020 first-time mothers: in three maternity hospitals

- **Self completion survey**

— antenatally and at **3, 6, 9 and 12 months after birth**

— **Data collection** from women's records

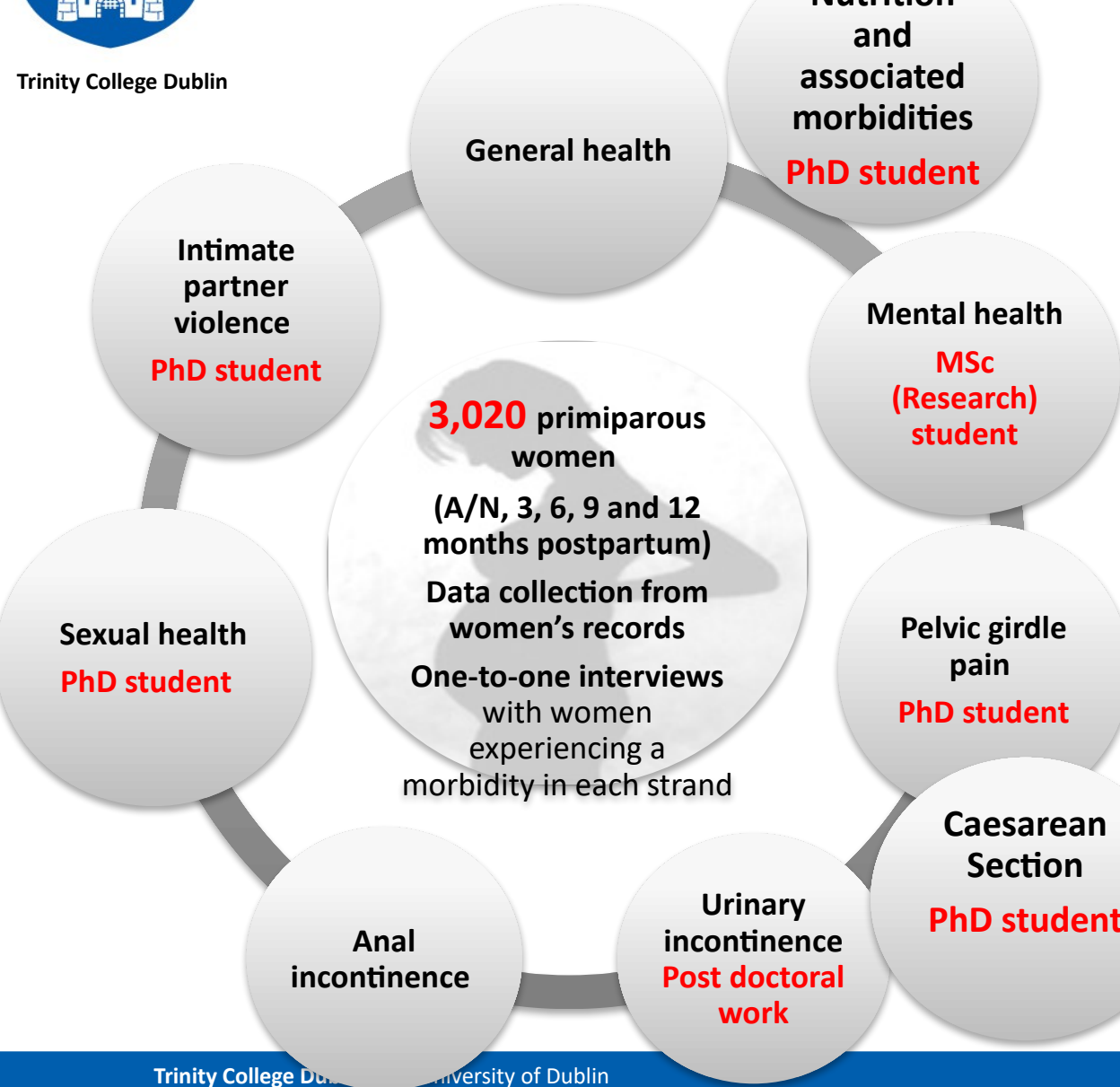
— **Interviews**



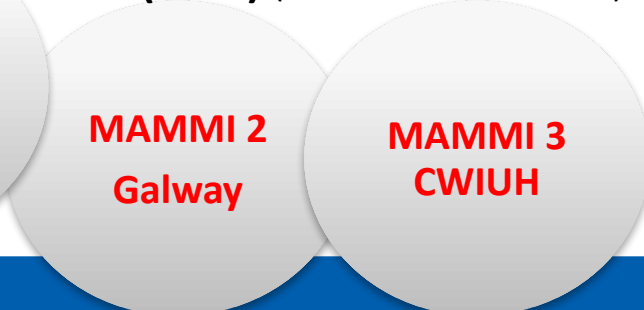


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The MAMMI study



- **5 post-doc researchers (3 F/T)**
- **6 PhD students**
 - 2 complete, 4 in progress
 - 1 MSc (Research) student
- **Funding - €2,052,089**
 - Health Research Board
 - HSE
 - Friends of the Rotunda
 - Friends of the Coombe
 - TCD PhD stipend
 - **Science Without Borders (SWB)** (Brazilian Government)



A green rectangular sign with rounded corners and a white border, mounted on two wooden posts. The sign features the word "Results" in a large, white, sans-serif font. The background is a bright blue sky filled with numerous white, fluffy clouds of varying sizes.

Results



Urinary incontinence



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Leaking urine	No symptoms %(n)	Any leakage of urine %(n)	Leaking urine at least once per month
Before pregnancy (n=858)	65.2 (n=559)	34.8 (n=299)	7.2 (n=62)
During pregnancy (n=853)	61.3 (n=523)	38.7 (n=330)	21.0 (n=181)
At 3 months postpartum (n=577)	42.1 (n=243)	57.9 (n=334)	30.8 (n=178)
At 6 months postpartum (n=578)	56.6 (n=327)	43.4 (n=251)	20.9 (n=121)

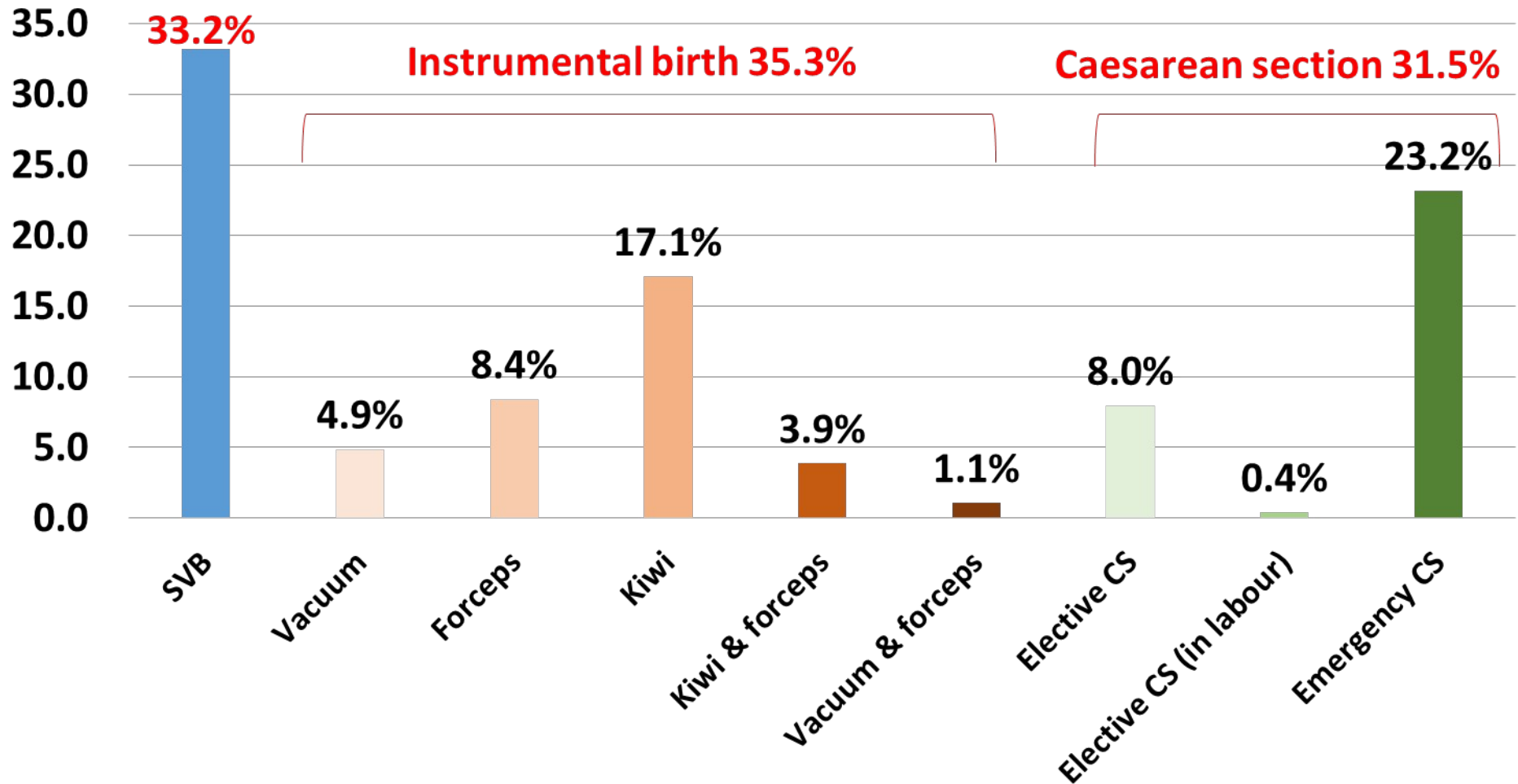


Mode of birth



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n=1972 (%)





Factors associated with urinary incontinence at 3 months postpartum



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Leaking urine at least once per month	3 months postpartum	
	n=154	28.9%

Significant factors	p-value	Adjusted OR (95% CI)
Age 30-34 years	0.004	1.9 (1.0-3.5)
Reporting UI in pregnancy	0.003	2.8 (1.4-5.6)
Vacuum/kiwi	0.05	2.1 (1.0-4.3)
Forceps/combined	0.03	2.8 (1.1-6.8)
CS in labour ↓	0.03	0.3 (0.1-0.9)



Factors associated with urinary incontinence at 6 months postpartum



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Leaking urine at least once per month	6 months postpartum	
	n=102	19.1%

Significant factors	p-value	Adjusted OR (95% CI)
BMI <18.5kg/m²	0.05	2.7 (1.0-7.3)
BMI ≥30kg/m²	0.02	2.7 (1.2-6.2)
Reporting UI in pregnancy	0.002	2.9 (1.5-5.8)
Mode of birth	No significant difference	



Mode of birth and UI at 12 months postpartum



n= 1,136 at 12 months

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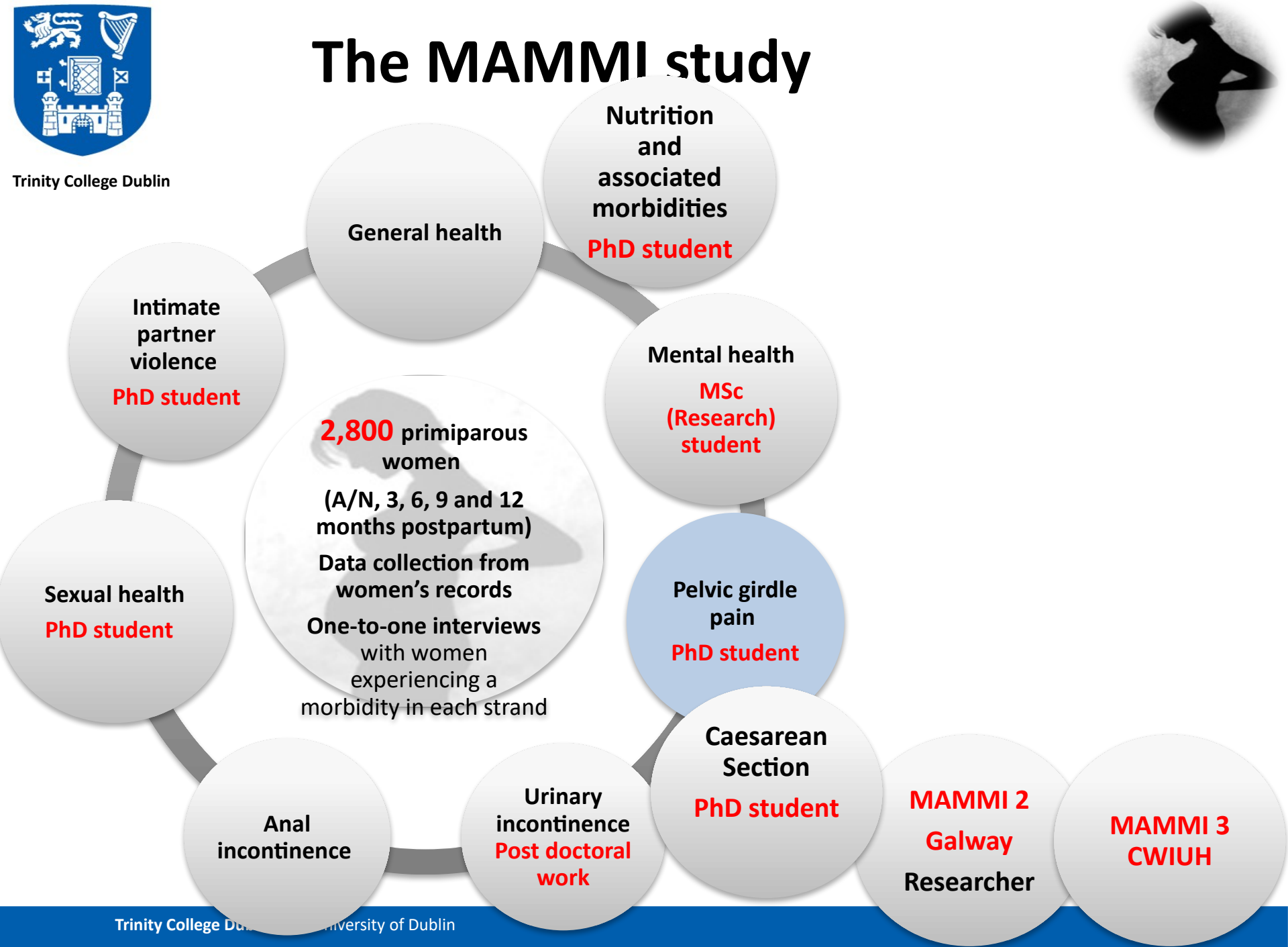
Twelve months	<i>P</i>	OR	95% CI	
SVB without epidural anaesthesia	Ref	-	-	-
SVB with epidural anaesthesia	0.902	0.97	0.57	1.64
Instrumental birth	0.066	1.52	0.97	2.37
Caesarean section	0.237	0.74	0.46	1.21



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Pelvic Girdle Pain (PGP): Prevalence during pregnancy



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	PPGP (%)	Anterior PPGP (%)	Posterior PPGP (%)	Combined PPGP (%)
In early/mid pregnancy (n=1478)	60.1	2.3	48.9	8.8
In the last month of pregnancy (n=1181)	69.7	4.5	43.7	21.3



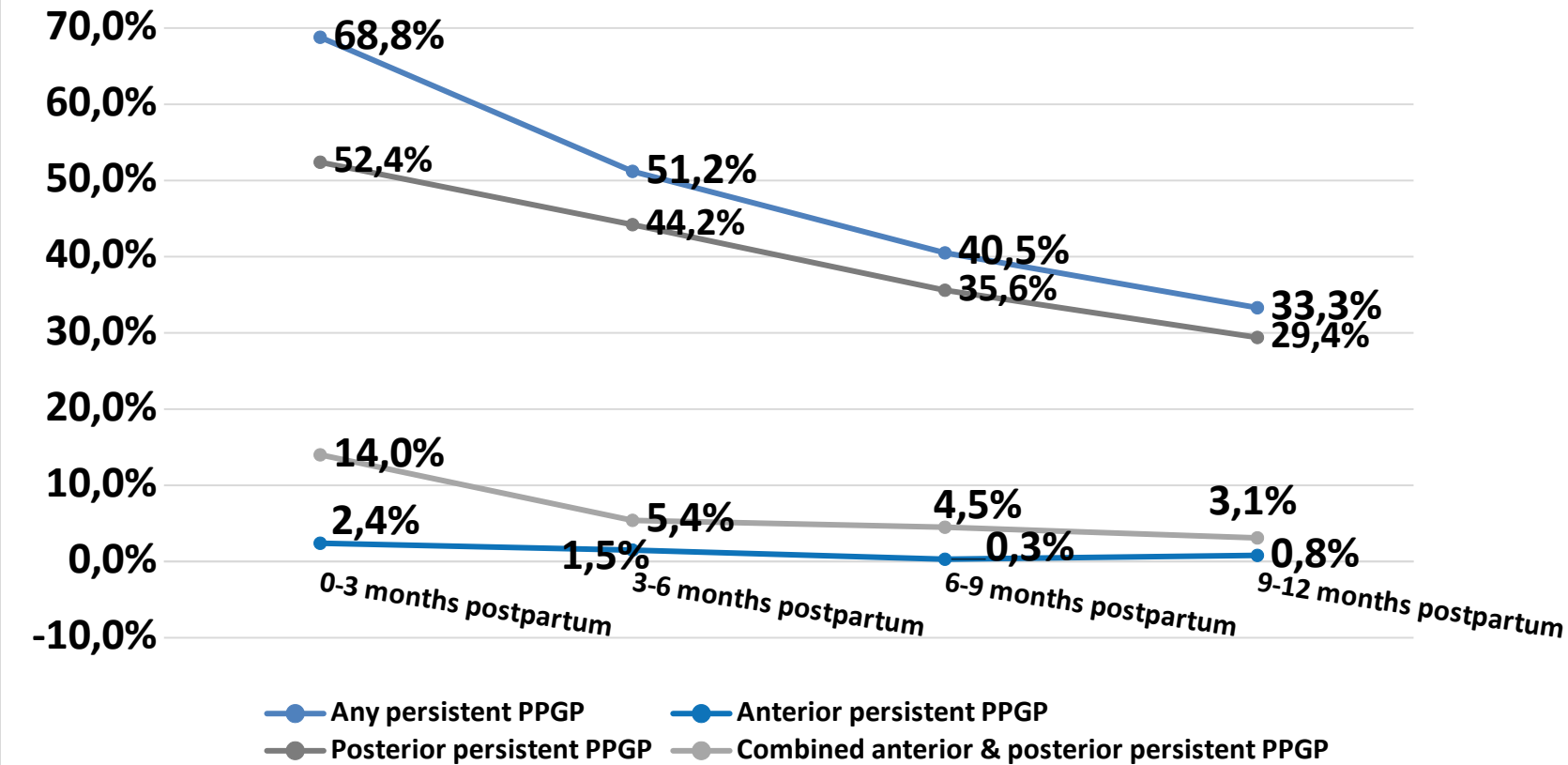
Findings: Prevalence postpartum



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Percentage of women with PGP during pregnancy (n = 1003, 67.9%) who have persistent symptoms postpartum





Risk & prognostic factors



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Key **risk** factors:

- Being obese or very obese
- History of low back or pelvic girdle pain before pregnancy
- Younger age (age 18-24)

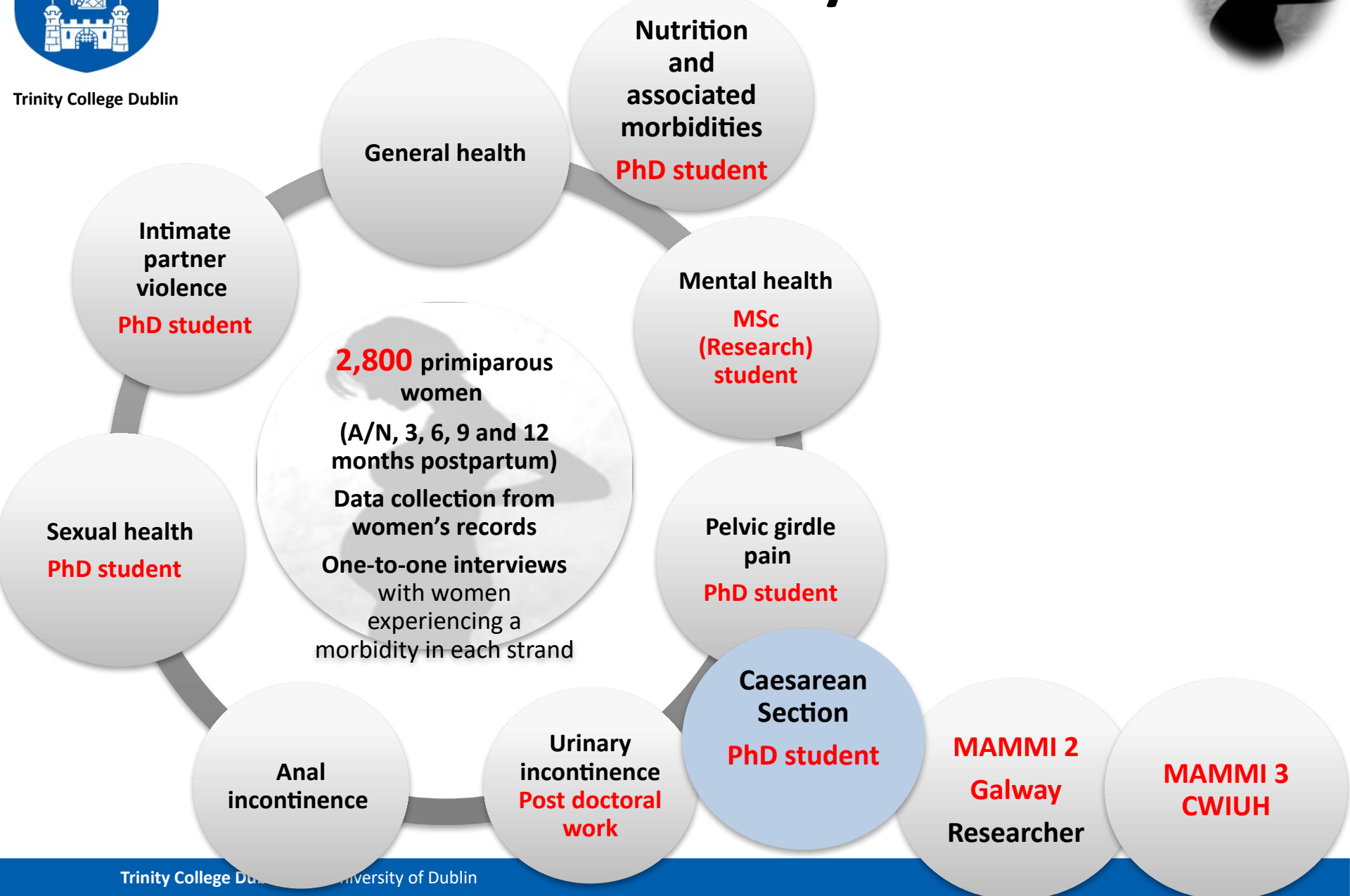
Key **prognostic** factors:

- Being obese or very obese
- History of low back or pelvic girdle pain
- Combined anterior & posterior PPGP during pregnancy



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Caesarean section strand

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Qualitative Phase

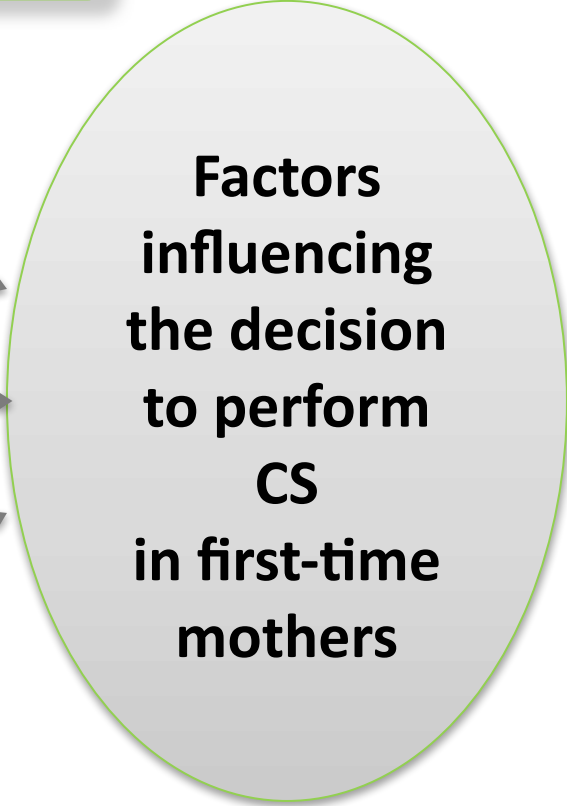


In-depth interview

**Women
(n=20-25)**

**Midwives
(n=10-13)**

**Obstetricians
(n=10-13)**



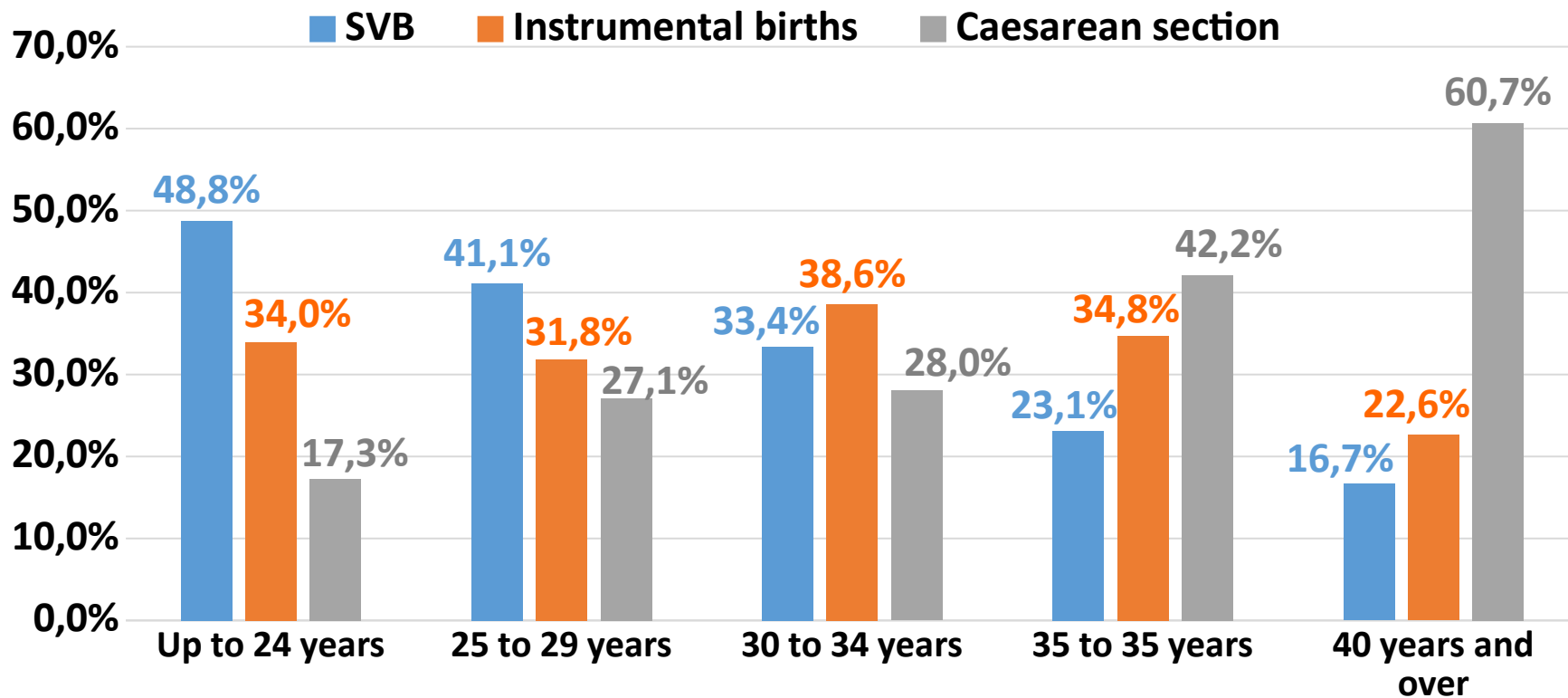


Age groups and mode of birth



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Age groups and mode of birth (n=1966)





Pre-pregnancy BMI categories and mode of birth

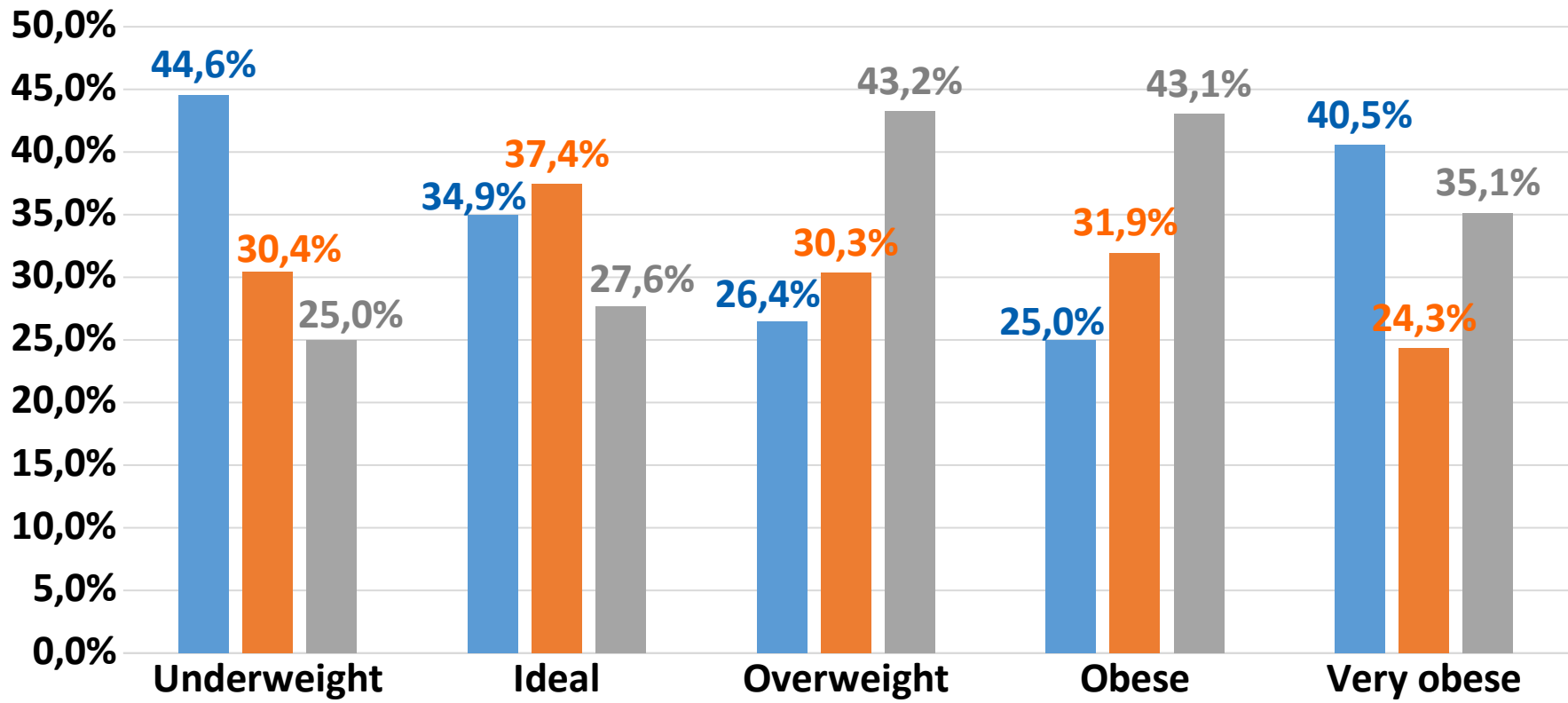


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BMI categories and mode of birth (n=1811)

■ SVB ■ Instrumental birth ■ Caesarean section





Visits to GP, ER or readmission (for own health), and mode of birth

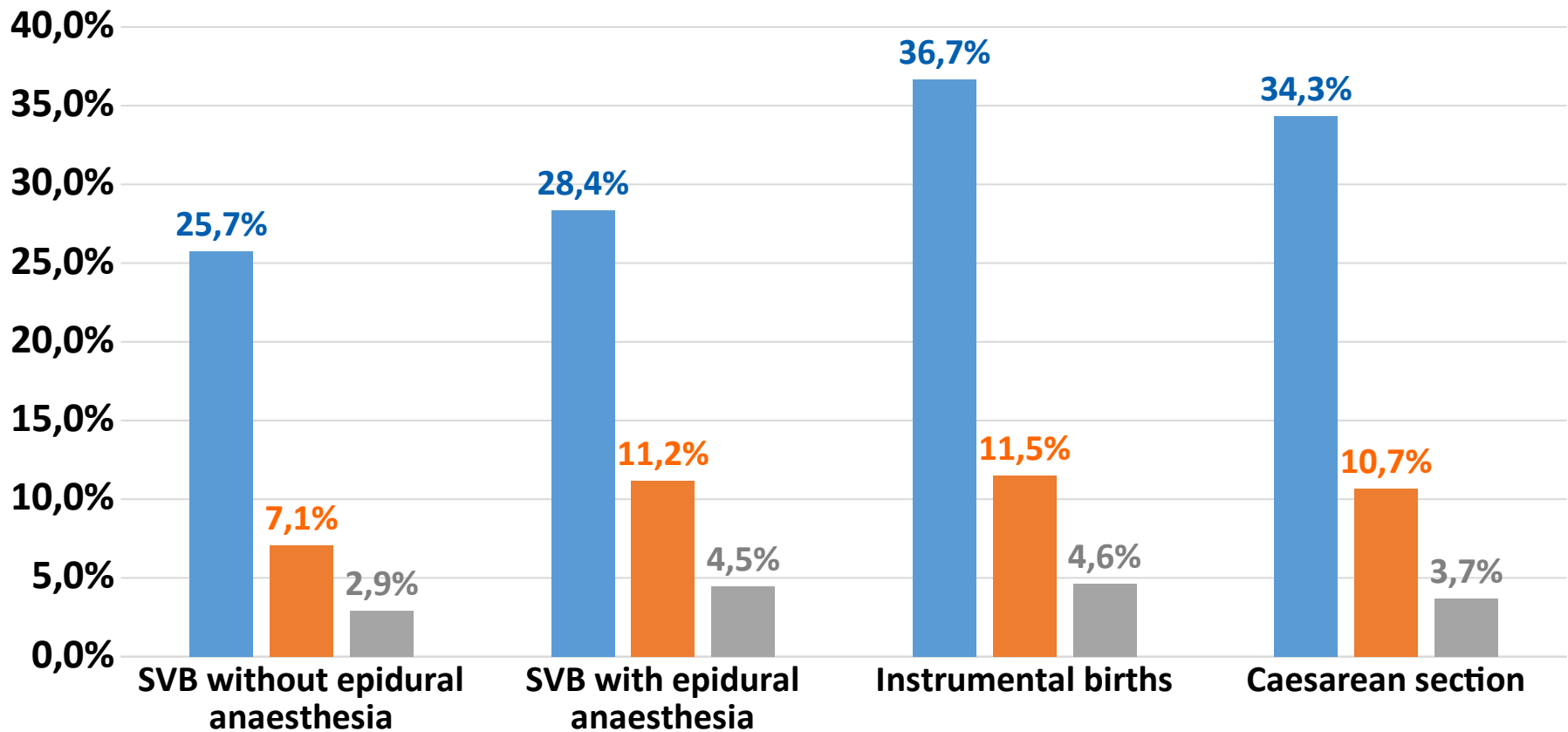


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Visited GP \geq twice, attended ER or readmission up to 3 months postpartum (n=1605)

■ Visited GP \geq twice ■ Attended ER ■ Readmitted



Caesarean section wound pain (up to 3 months postpartum)



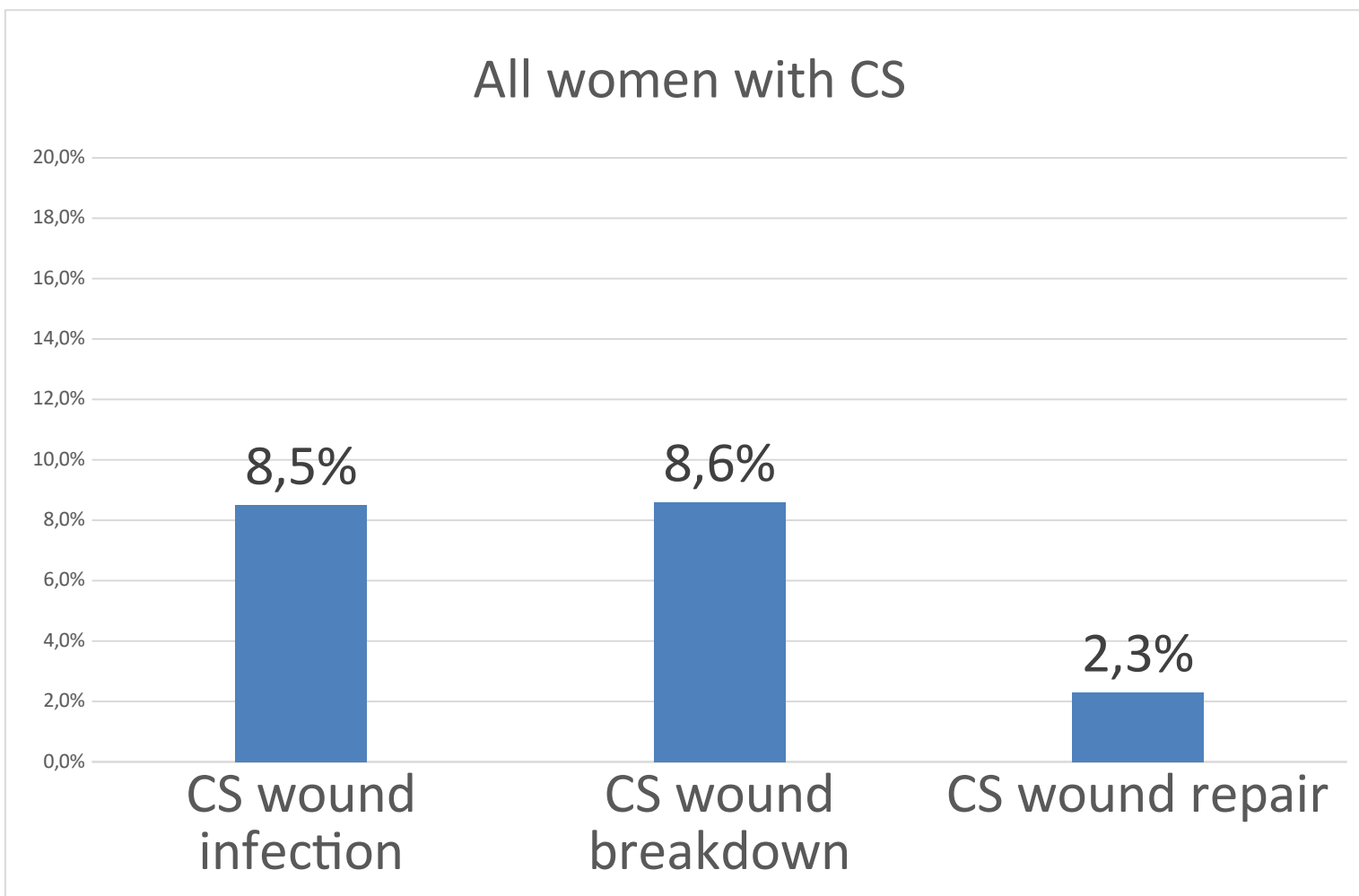
271 out of 516 women (53%) who had CS stated that they had wound pain up to three months postpartum.



Caesarean section wound infection, breakdown and repair (up to 3 months postpartum)



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Depression in early pregnancy using DASS-21



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“Over the past week, ...”	During early pregnancy	
	n = 2119	%
Normal	1645	77.6
Mild	166	7.8
Moderate	154	7.3
Severe	50	2.4
Extremely severe	105	4.9

14.6%



Anxiety in early pregnancy using DASS-21



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“Over the past week, ...”	During early pregnancy	
	n = 2121	%
Normal	1217	57.4
Mild	351	16.5
Moderate	215	10.1
Severe	139	6.6
Extremely severe	199	9.4

26.1%



What women told us about Passing urine when they don't mean to



During pregnancy

- Almost **2** in **5** women leaked urine

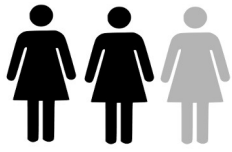


Women said it was
'normal in pregnancy'

9 out of **10** women
did **NOT** talk to a
health professional

After the birth

- Almost **2** in **3** women leaked urine at 3 months



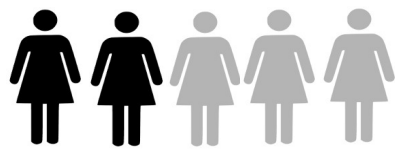


What women told us about

Passing urine when they don't mean to

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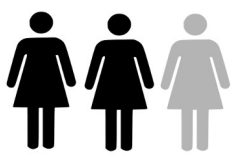


Women said it was
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9 out of **10** women did **NOT** talk to a health professional

After the birth

- Almost **2** in **3** women leaked urine at 3 months



3 out of **4** GPs and **2** out of **3** PHNs did **NOT** ask about it in the first 3 months





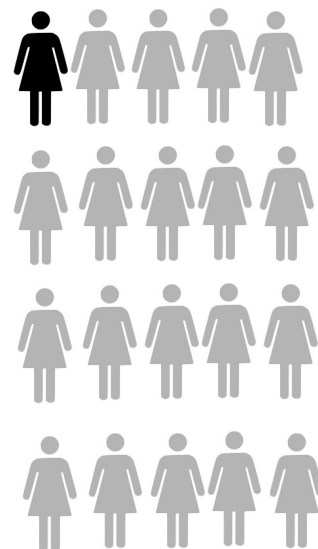
What women told us about

Passing stools when they don't mean to



During pregnancy

— **1** in **20** women leaked stools



After the birth

— **1** in **8** women leaked stools at 3 months



3 out of **4** GPs and **2** out of **3** PHNs did **NOT** ask about it in the first **3** months



What women told us about

Anxiety



During pregnancy

— **1** in **21** women experienced anxiety



After the birth

— **1** in **12** women experienced anxiety



1 in **2** GPs and
1 in **3** PHNs
 did **NOT** ask
 about it in the
 first 3 months



What women told us about Depression

During pregnancy

— **1** in **10** experienced depression



After the birth

— **1** in **6** women experienced depression at 3 months



1 in **2** GPs and **1** in **3** PHNs did **NOT** ask about it in the first 3 months



So what can we learn from the data presented today?



Unifying theme

**the ‘hidden in plain sight’ issues
that
adversely affect women’s health**



Take home message



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For women...

**health problems such as leaking urine, faeces,
having pain in the pelvic area, being anxious,
down or depressed**

**are common, but they are not normal, and can be
treated.**



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Take home message



**Put women first, foremost and
central**

**if women are well,
babies and families will be well too.**



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Thank You



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Health Service Executive