

Women's knowledge and  
perception of fetal movements  
in late pregnancy

Findings from an Aotearoa  
New Zealand survey

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# Decreased fetal movement (DFM)



DFM is associated with adverse outcomes, and is the reason for presentation in 40-50% of stillbirths

DFM is the leading reason for pregnant women to present acutely

1 in 6 pregnant women present with DFM in Auckland, New Zealand

# Consensus-based FM guidelines

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All pregnant women should be routinely provided with written and verbal information about fetal movements including **what to expect** and **when to contact care**.

- PSANZ-SANDA. Clinical practice guideline for the care of women with decreased fetal movements. V2.3. 2019.
- RCOG. Green-top guideline 57. Reduced fetal movements. 2011. (updated 2017).



**Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation**

Endorsed by:



# Aotearoa NZ Fetal Movement Survey

## Our Questions

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### Aotearoa New Zealand fetal movement survey

Are you pregnant and due in the next three months? We would love to hear about your baby's movements.



Q1) What FM *information* do women receive and what is the source?

Q2) What *concerns* do pregnant women have about FM?

Q3) What are the *characteristics* of maternally perceived FM?

# Aotearoa NZ Fetal Movement Survey Online Survey

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**Aim:** NZ-wide recruitment of women with 3<sup>rd</sup> trimester singleton pregnancies, Dec 21 to Mar 22

**Enriched** with face-to-face invitation to participate for women from an urban multi-ethnic, socio-economically disadvantaged region, with a high stillbirth rate.

## Aotearoa New Zealand fetal movement survey

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# Our FM Survey Results: Participant Demographics

1640 eligible participants

N=1640 (%)	
<b>Age</b>	
<20	28 (1.7)
20–24	138 (8.4)
25–29	457 (27.9)
30–34	658 (40.1)
35–39	300 (18.3)
40+	59 (3.6)
<b>BMI at booking</b>	
<24.9	686 (41.8)
25-29.9 overweight	446 (27.2)
30+ obese	487 (29.7)
Missing	21 (1.3)
<b>Ethnicity prioritised</b>	
European	1042 (63.5)
South Asian	80 (4.9)
South-East/East Asian	80 (4.9)
Māori	266 (16.2)
Pacific	119 (7.3)
Other ethnicity	35 (2.1)
<b>Education highest</b>	
Primary / secondary	362 (21.1)
Non-university trade	259 (15.8)
University degree	657 (40.1)
Post-grad degree	362 (22.1)

<b>Marital status</b>	
Single	90 (5.5)
Unmarried partner	629 (38.4)
Married	921 (56.2)
<b>Urban / rural</b>	
Urban	1117 (68.1)
Semi-rural	303 (18.5)
Rural	220 (14.0)
<b>Chosen pregnancy provider</b>	
Midwife	1519 (92.6)
Doctor / Obstetrician	121 (7.4)
<b>Parity</b>	
Para 0	916 (55.9)
Para 1	414 (25.2)
Para 2	194 (11.8)
Para 3+	116 (7.1)
<b>Gestation</b>	
28-32 weeks	914 (55.7)
33-36 weeks	490 (29.9)
37-39.9 weeks	206 (12.6)
40+ weeks	30 (1.8)
<b>Antenatal visits</b>	
Inadequate	89 (5.4)
Intermediate	385 (23.5)
Adequate	668 (40.7)
Adequate plus	498 (30.4)

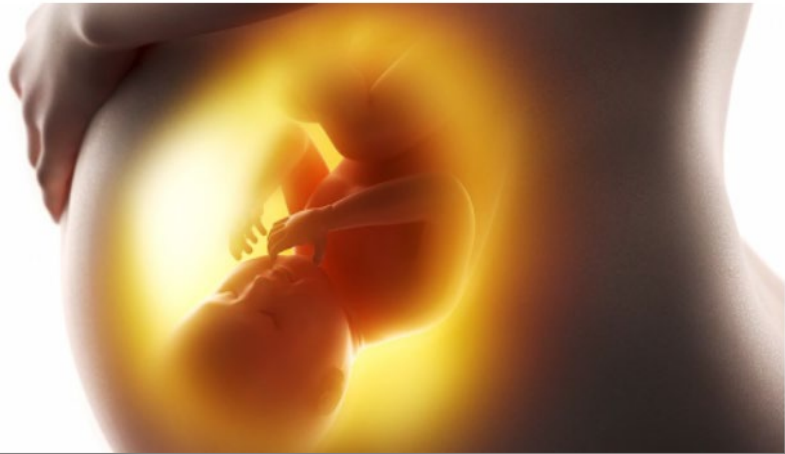
# Aotearoa NZ Fetal Movement Survey

## Our Questions

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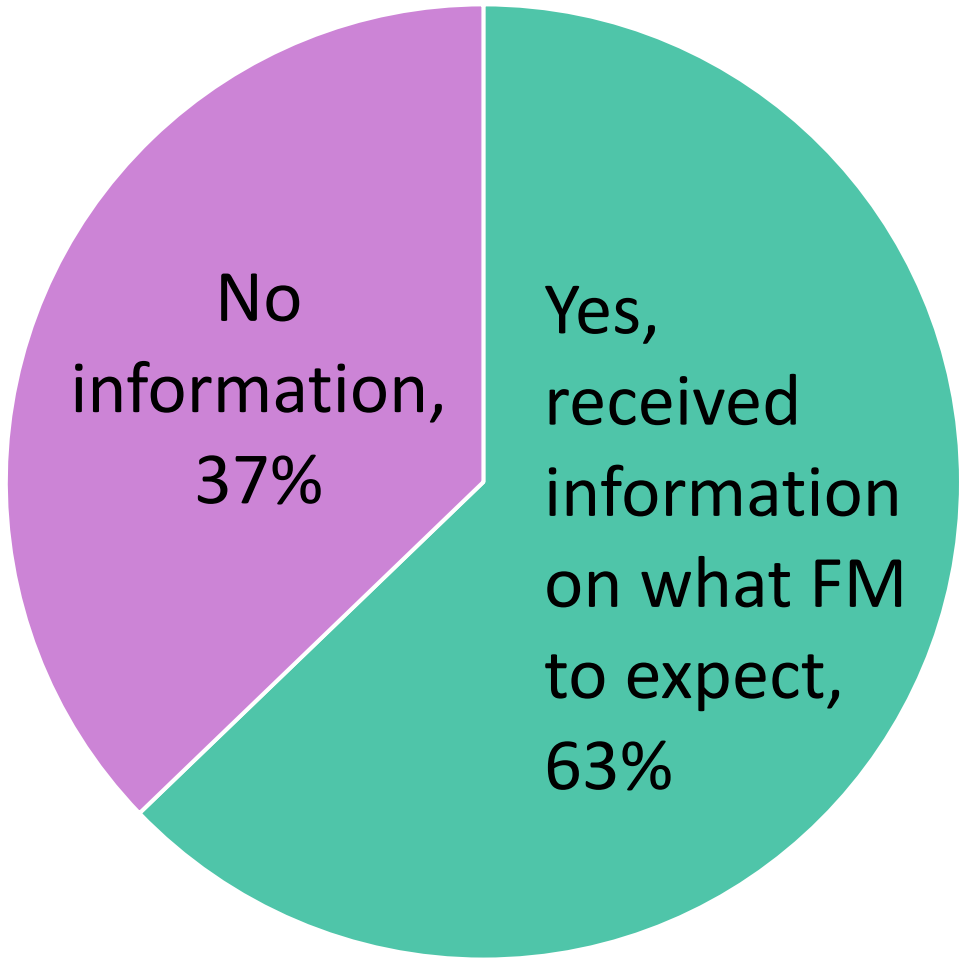
### **Aotearoa New Zealand fetal movement survey**

Are you pregnant and due in the next three months? We would love to hear about your baby's movements.



Q1

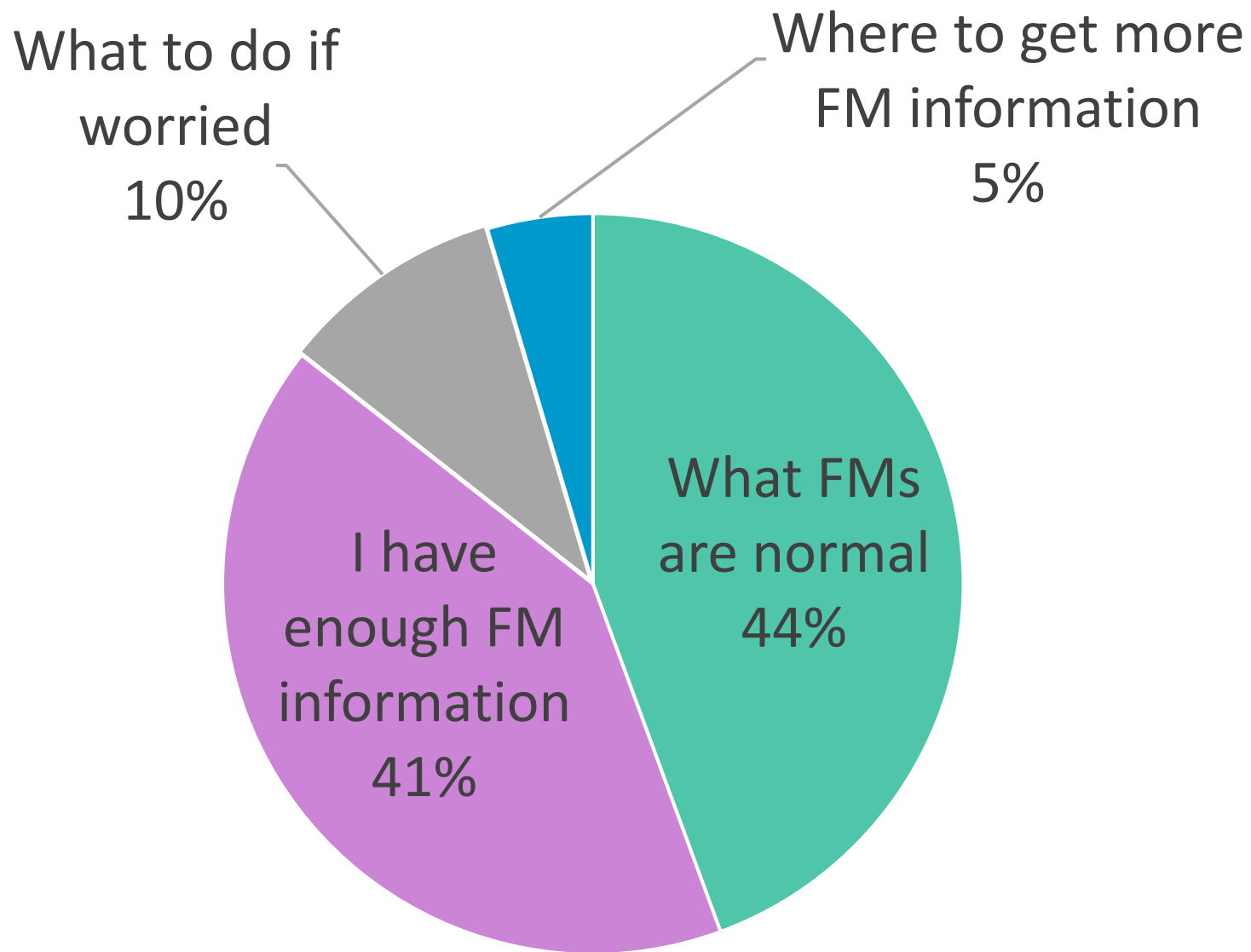
FM Information



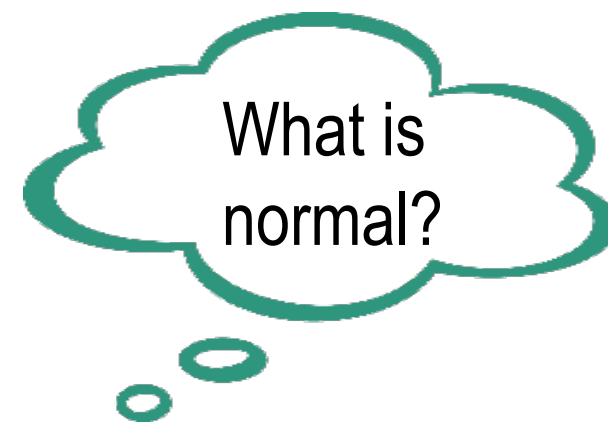
‘During this pregnancy, have you been given advice or information about what baby movements to **expect**?’

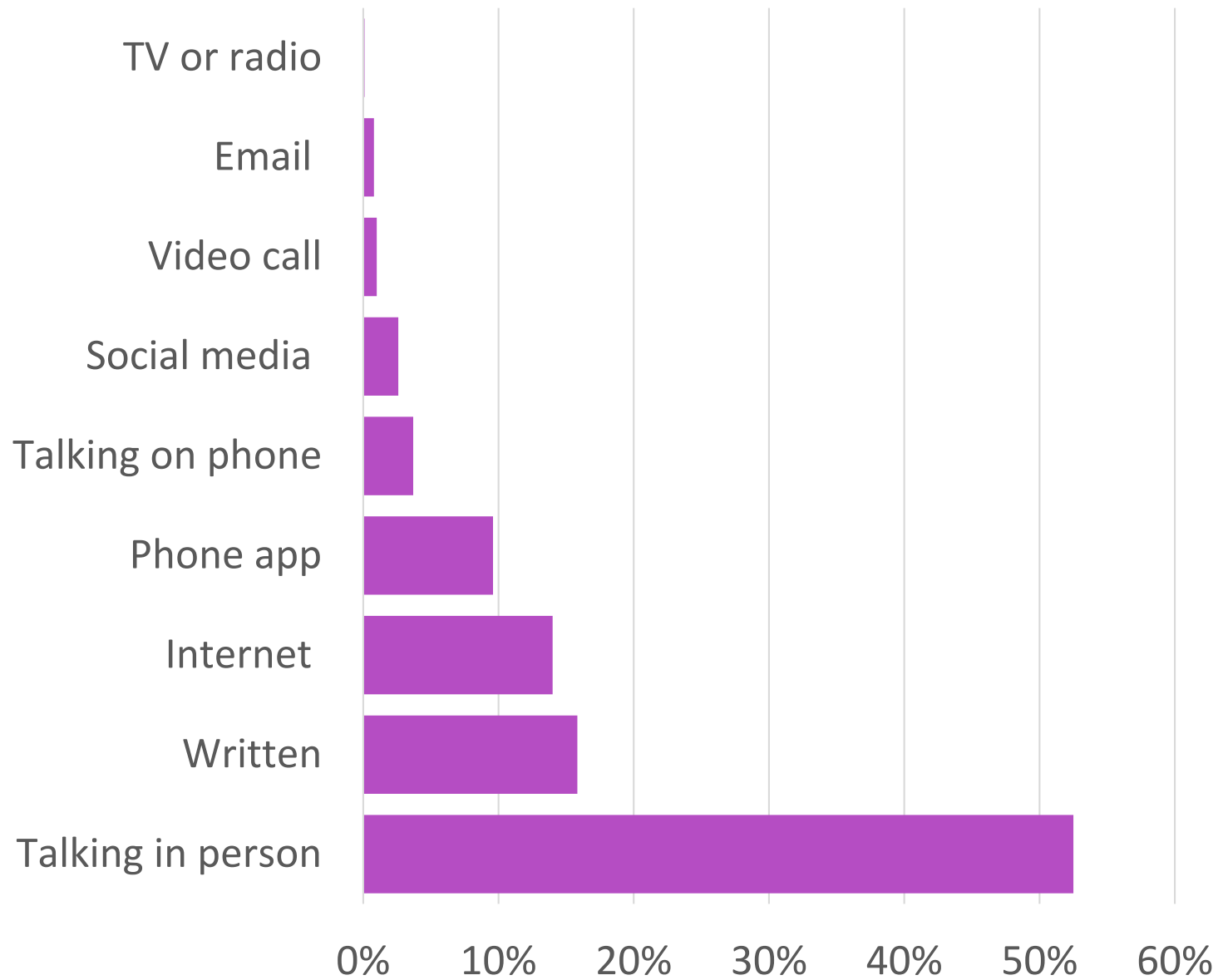




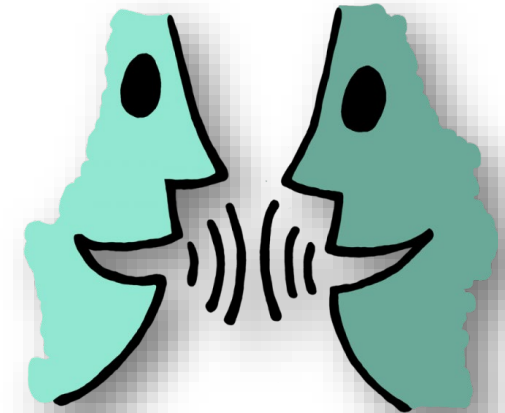


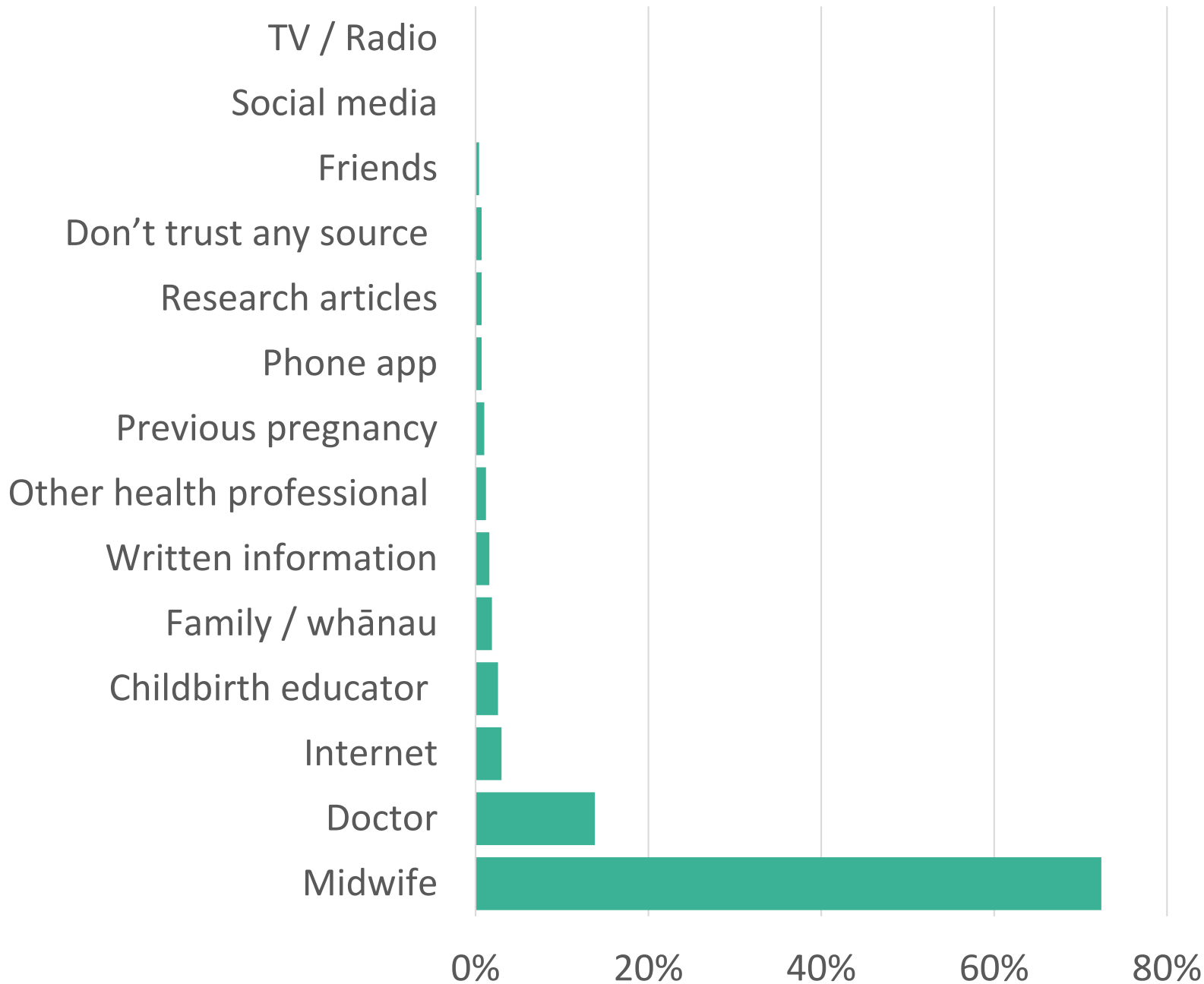
‘Would you like to have **more baby movement information**, and if so, **what?**’





‘If you could choose **one way** of getting baby movement information, what would this be?’





‘During this pregnancy, what is your **most trusted source** of baby movement information?’



# Aotearoa NZ Fetal Movement Survey

## Our Questions

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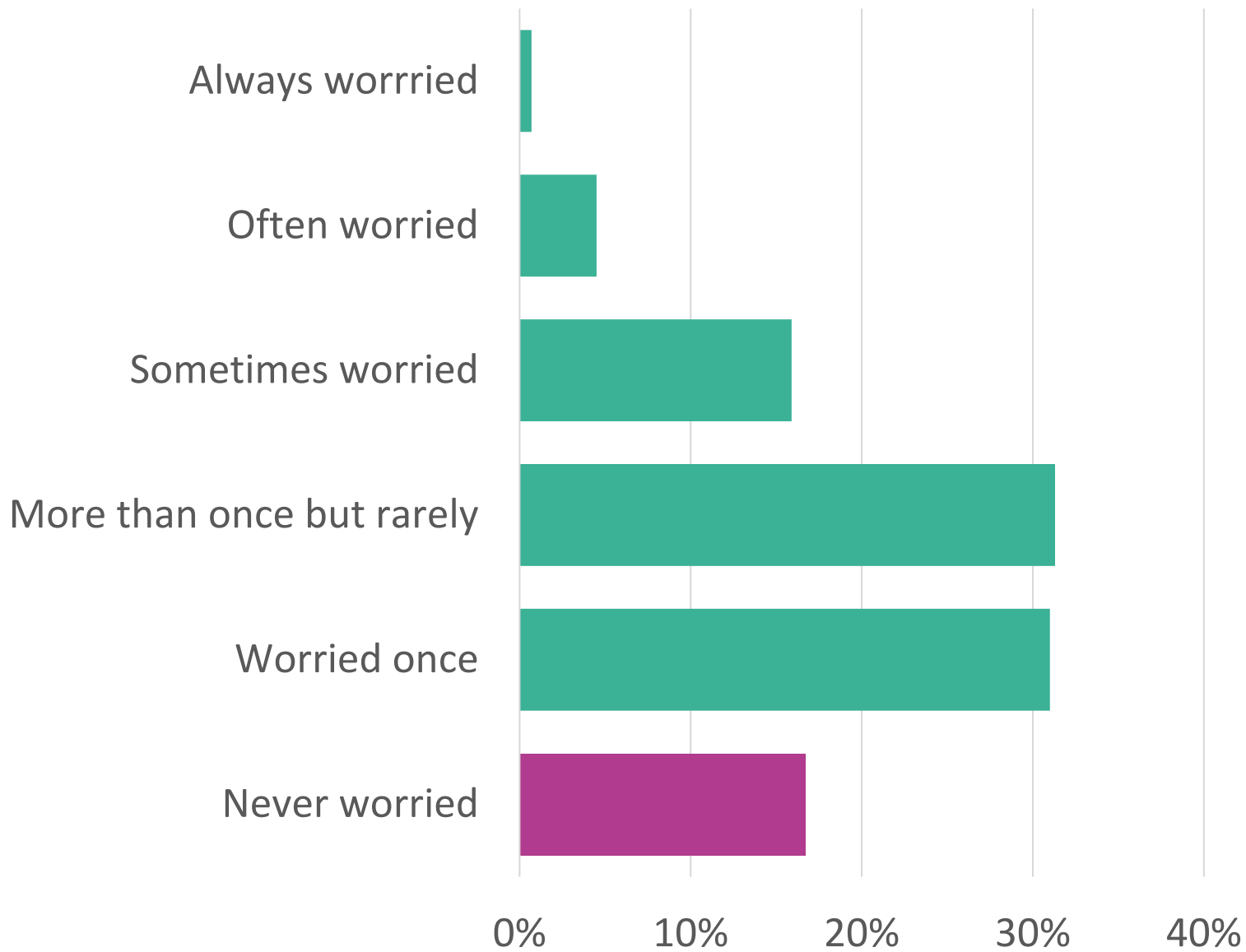
### **Aotearoa New Zealand fetal movement survey**

Are you pregnant and due in the next three months? We would love to hear about your baby's movements.



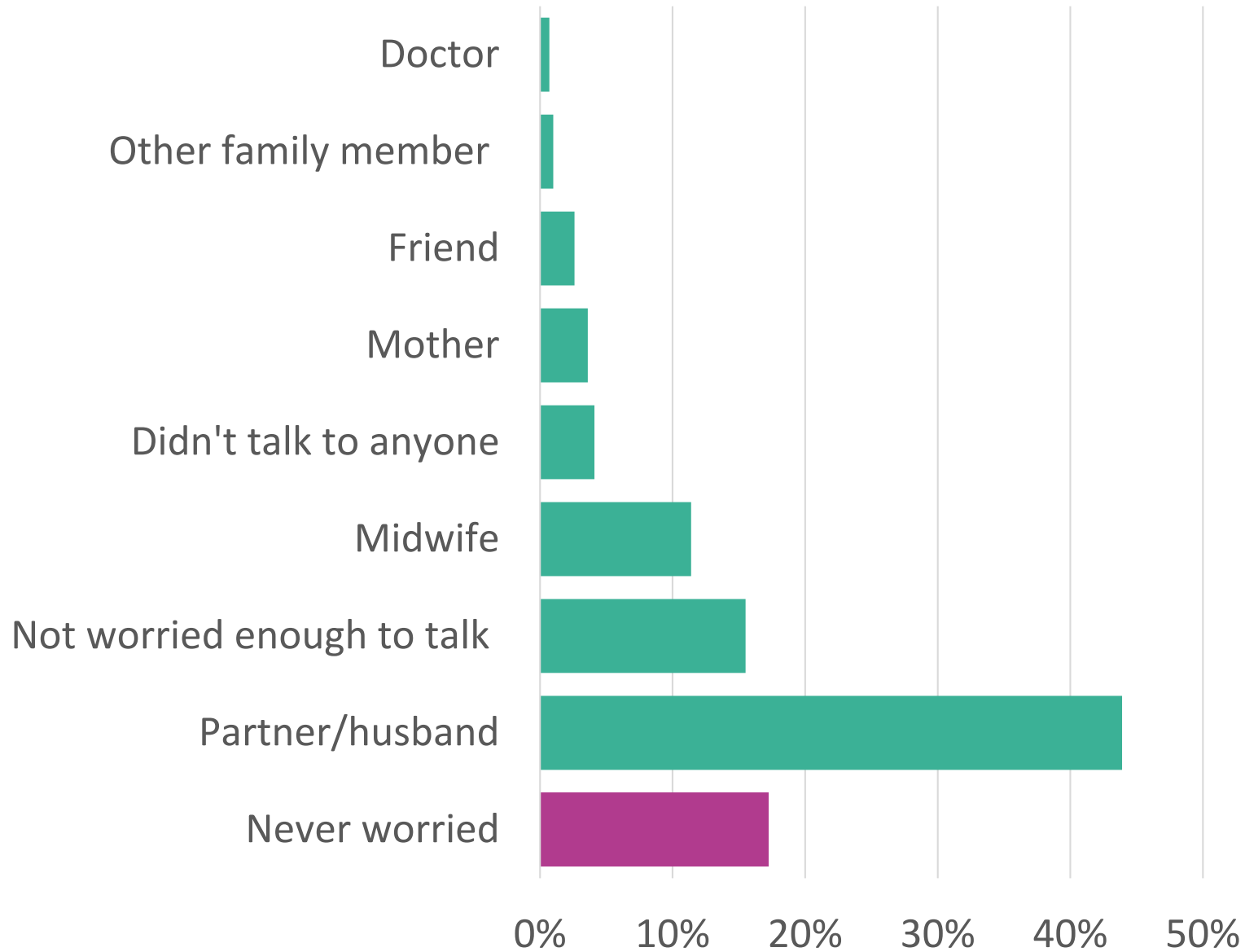
Q2

FM Concerns

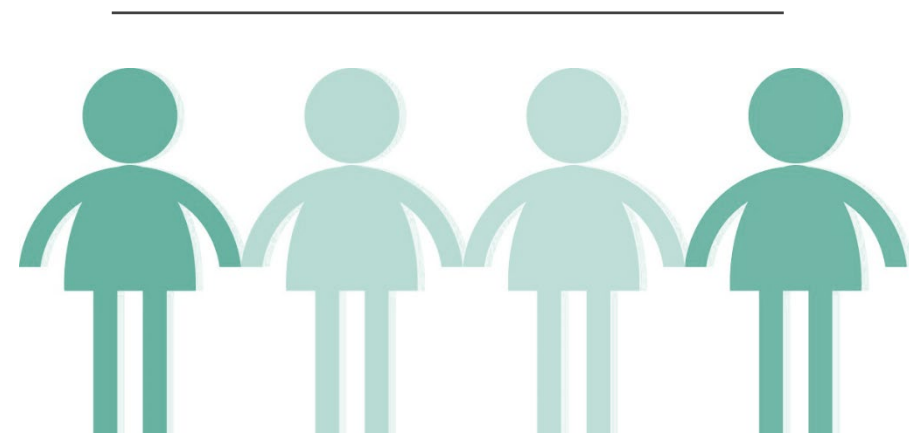


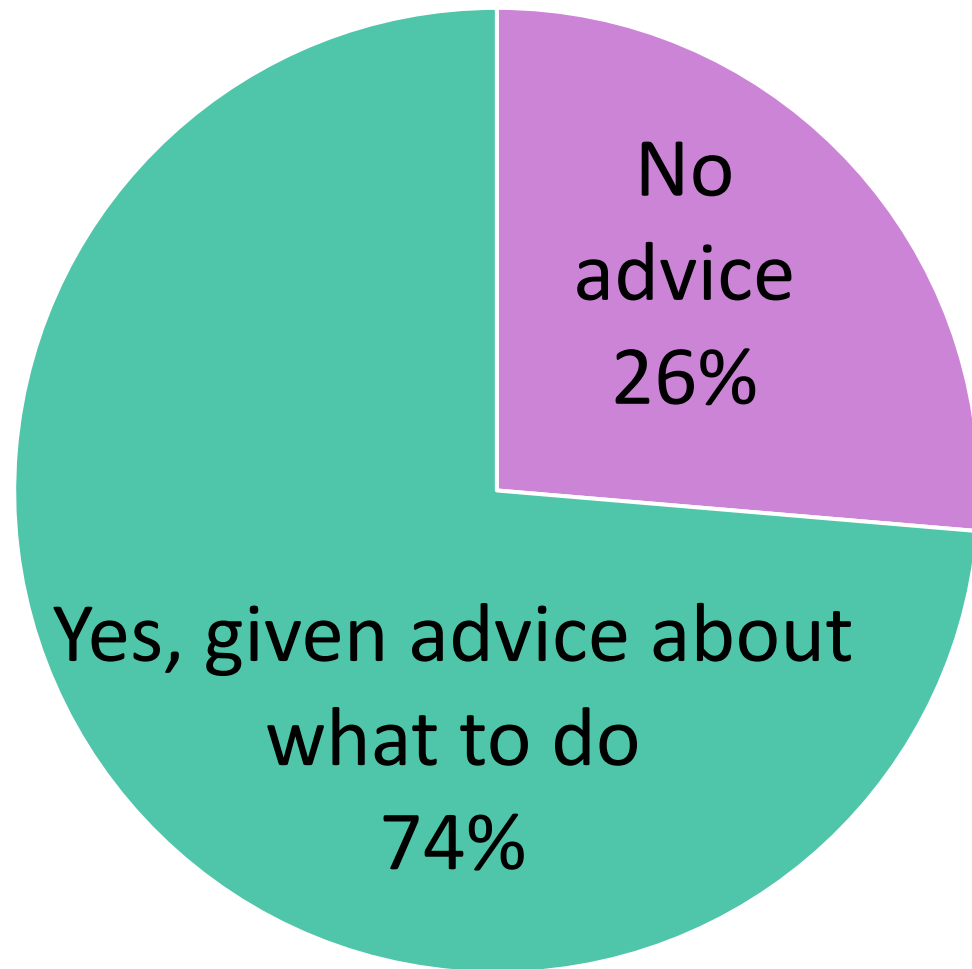
‘During this pregnancy, have you **ever worried** about baby’s movements?’





‘During this pregnancy, who was the **first person** you talked to when worried about baby’s movements?’

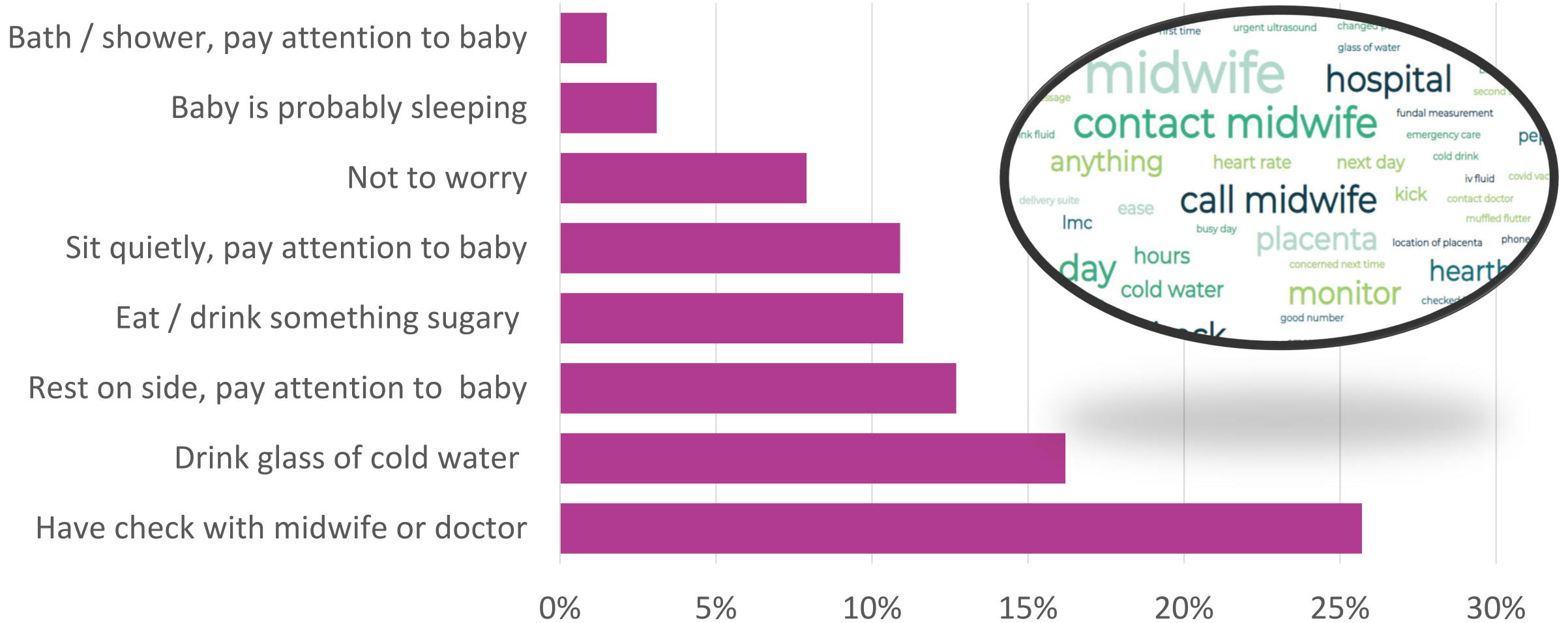




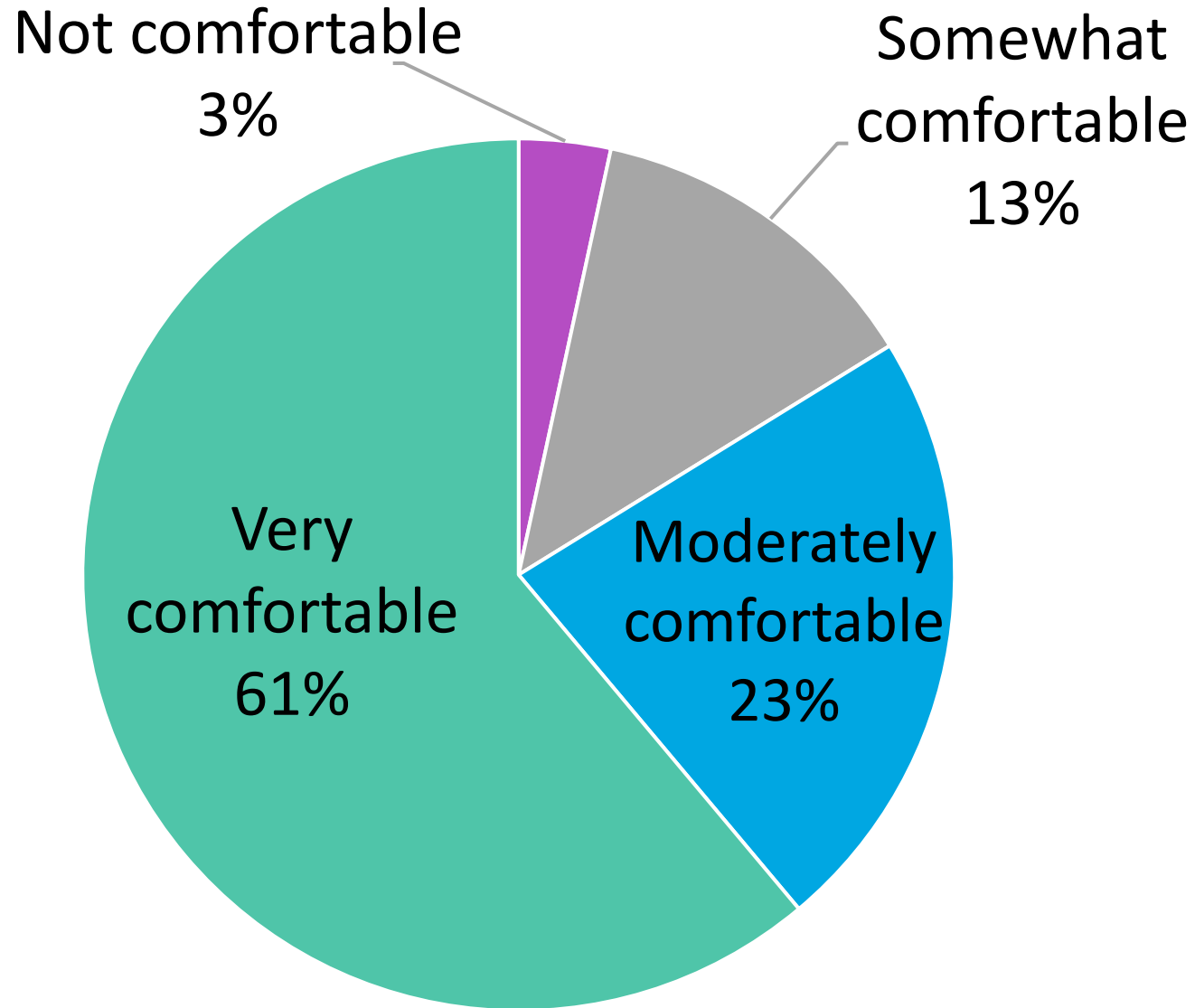
‘During this pregnancy, have you been given advice about **what to do if ever worried** about baby’s movements from midwife or doctor?’



# ‘What were you advised to do by midwife or doctor if worried about baby movements?’

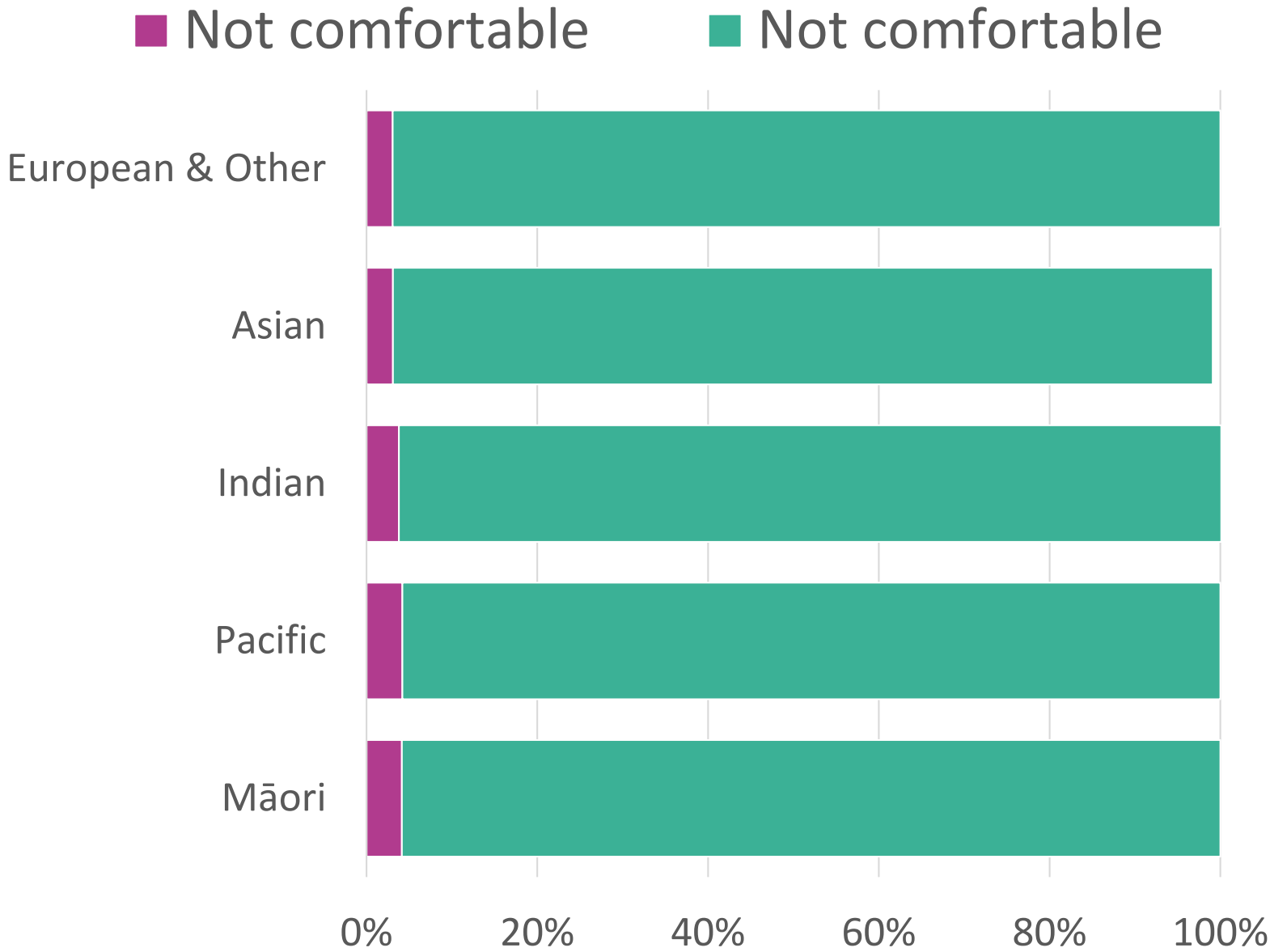






‘If worried about baby’s movements, **how comfortable would you feel contacting your midwife / doctor?**’





‘If worried about baby’s movements, how comfortable would you feel contacting your midwife / doctor?’  
 by ethnicity



UV odds ratio not significant for non-European ethnic groups compared to European & other

# Aotearoa NZ Fetal Movement Survey

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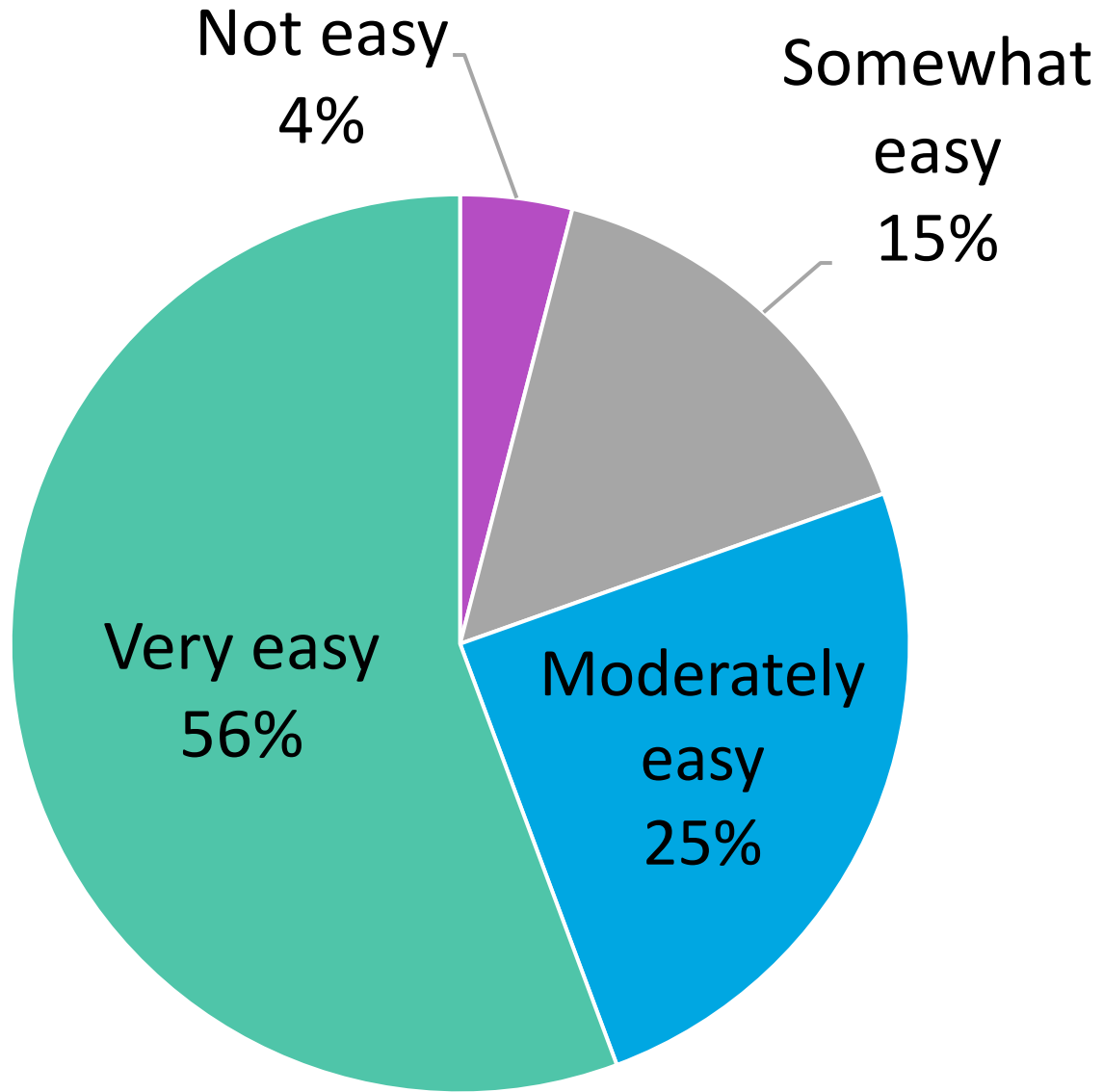
### **Aotearoa New Zealand fetal movement survey**

Are you pregnant and due in the next three months? We would love to hear about your baby's movements.



Q3

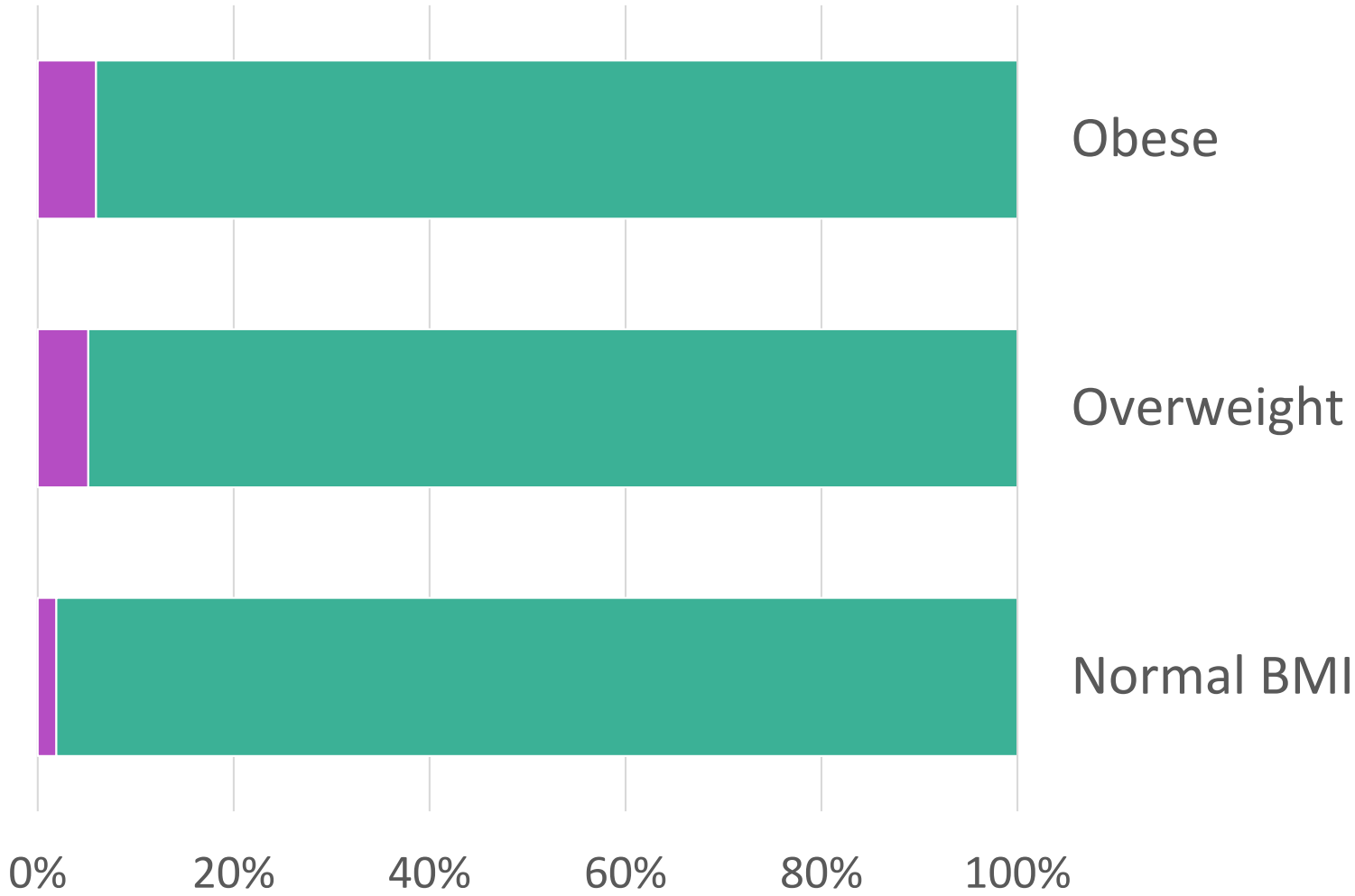
FM Characteristics



‘During this pregnancy, how **easy** is it to feel baby’s movements?’



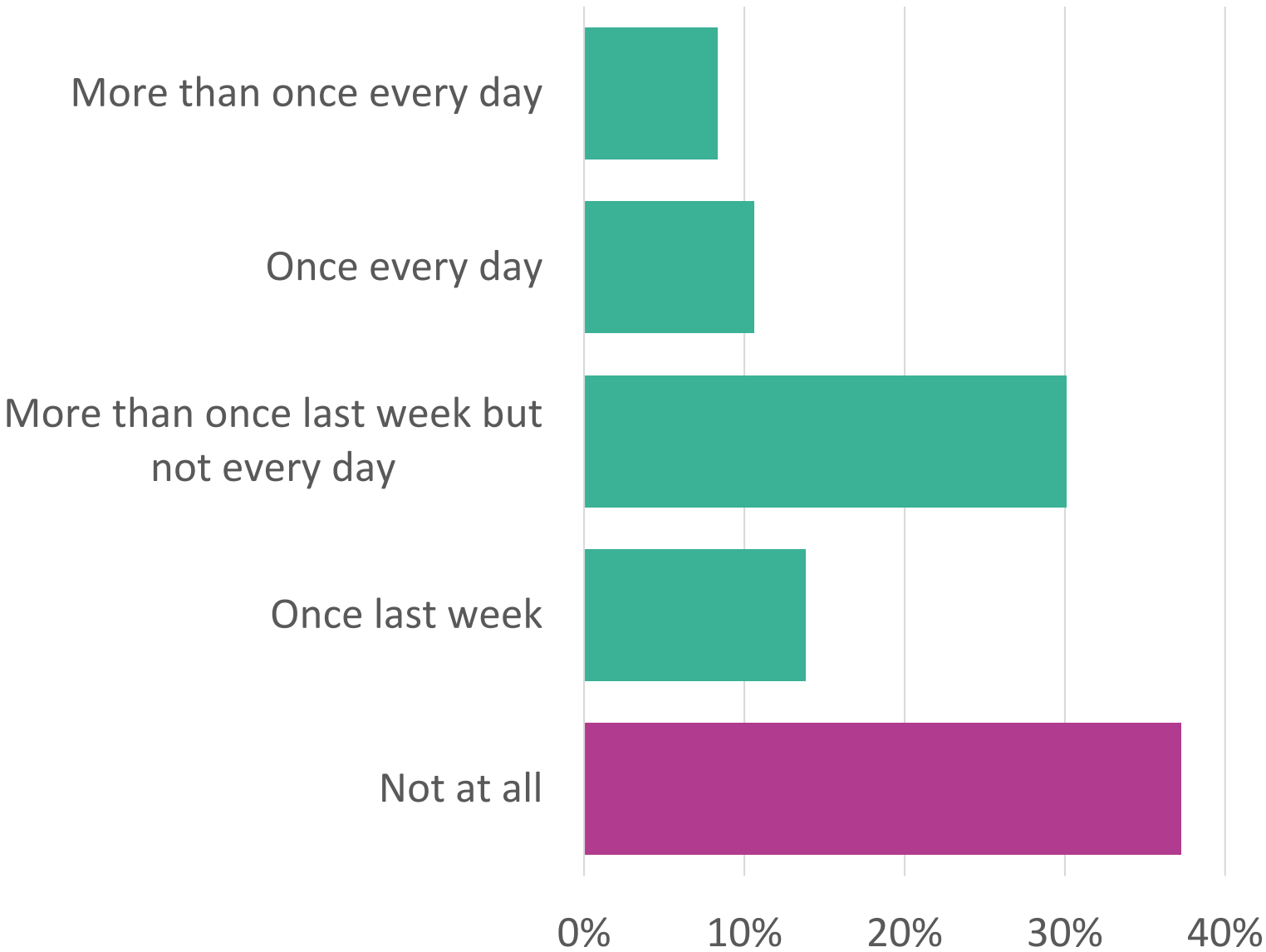
■ Not Easy ■ Easy



‘During this pregnancy, how **easy** is it to feel baby’s movements?’  
**by booking BMI**

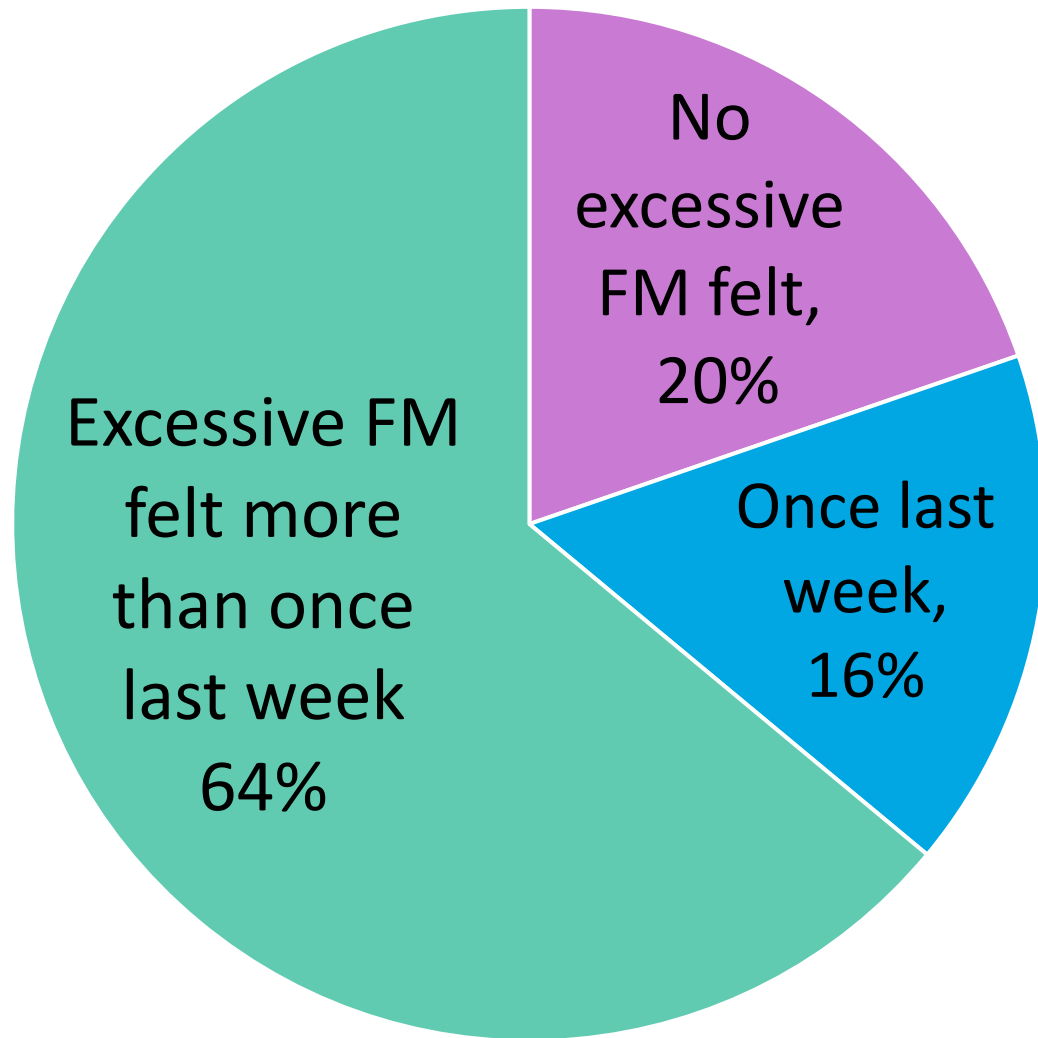


UV odds ratio significant for overweight (0.36, CI 0.18-0.71) & obese (0.31, CI 0.16-0.59) compared to normal BMI



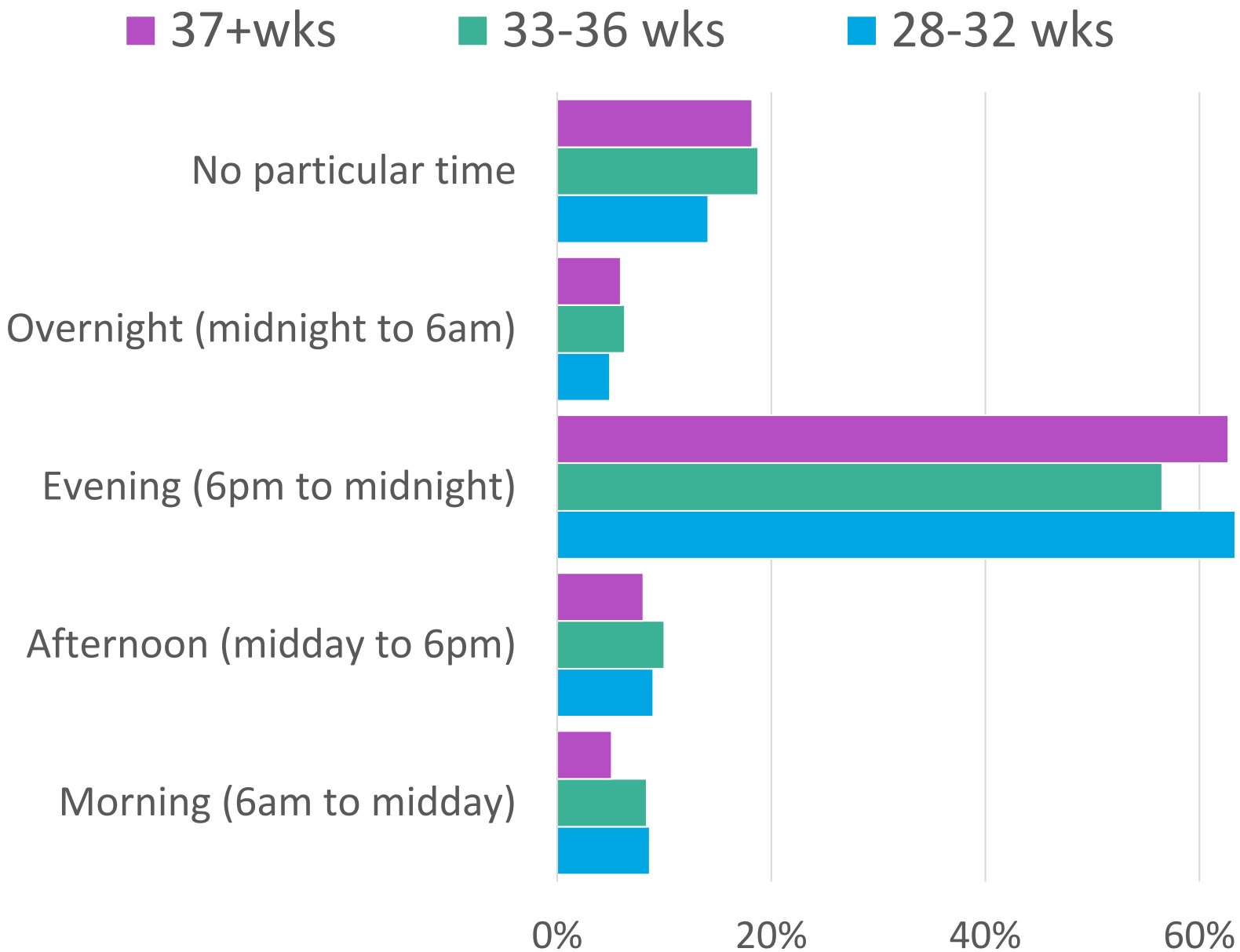
‘In the last week, how often did you feel baby have **hiccups**?’



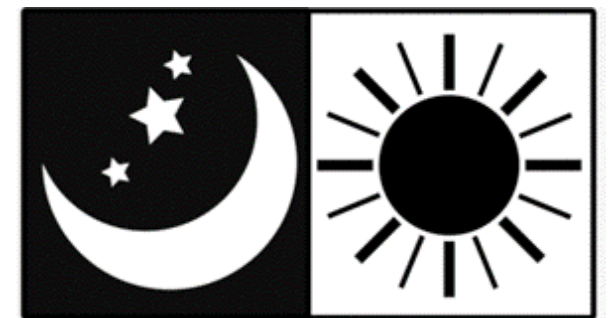


‘In the last week, did you ever feel baby **move excessively**?’  
(wild or crazy feeling movements)





In the last week, what **time of day** did you notice baby's movements the **most?**  
 by gestation



No association between time of day of most FM by gestation groups (Pearson chi-square  $p=0.126$ )



# Implications for practice

The majority of pregnant women wished for more FM information, provided face-to-face by their maternity care provider.

Most reported that it was easy to feel FM, FM were most noticeable in the evening, fetal hiccups and 'wild & crazy' FM were common.

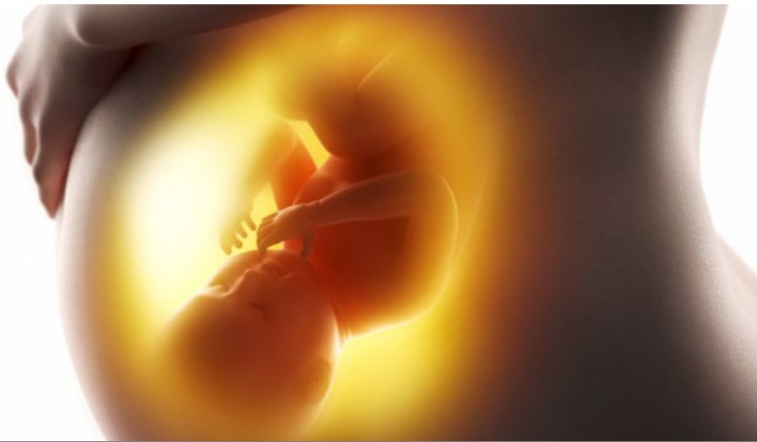
Worries about FM were common - women & their partners should be advised:  
*'don't go to asleep on your concerns, contact your midwife or doctor'*

# Tena koutou / thank you:

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## Aotearoa New Zealand fetal movement survey

Are you pregnant and due in the next three months? We would love to hear about your baby's movements.



## Our pregnant participants 😊

*Our fabulous fetal movement survey team:*  
Associate Professor **Chris McKinlay**, Dr **Nimisha Waller**, Māori Liaison Midwife **Annabel Johns**, Māori Student Midwife **Tania Webb**, Medical Student **Likhit Dukkipati**, Consumer & Bereaved Mother **Tania Cornwell**, Community Midwife **Lorna Bowles**, Professor **Judith McAra-Couper**, Associate Professor **John Thompson**, Professor **Lesley McCowan**