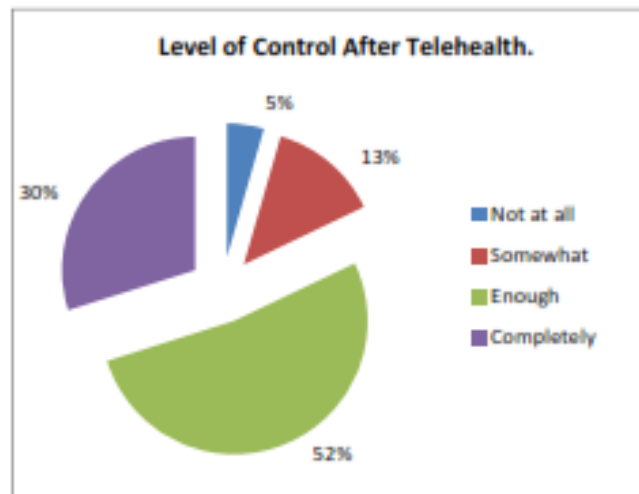
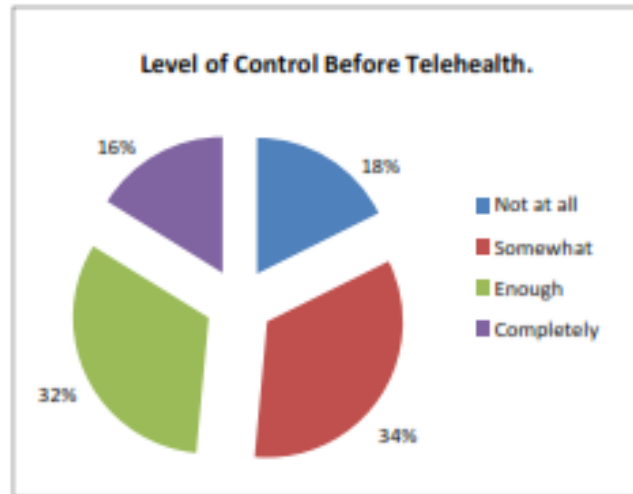


Clinical outcomes – PIH (n=88)

- Approximately 50% of women using telehealth for PIH raised an ‘alert’
- 10% were ‘false alerts’
- x3 taken off telehealth monitoring
- x5 admitted after telehealth ‘alert’
- **No adverse maternal outcomes**

'Level of control' – pre vs post telehealth

PIH



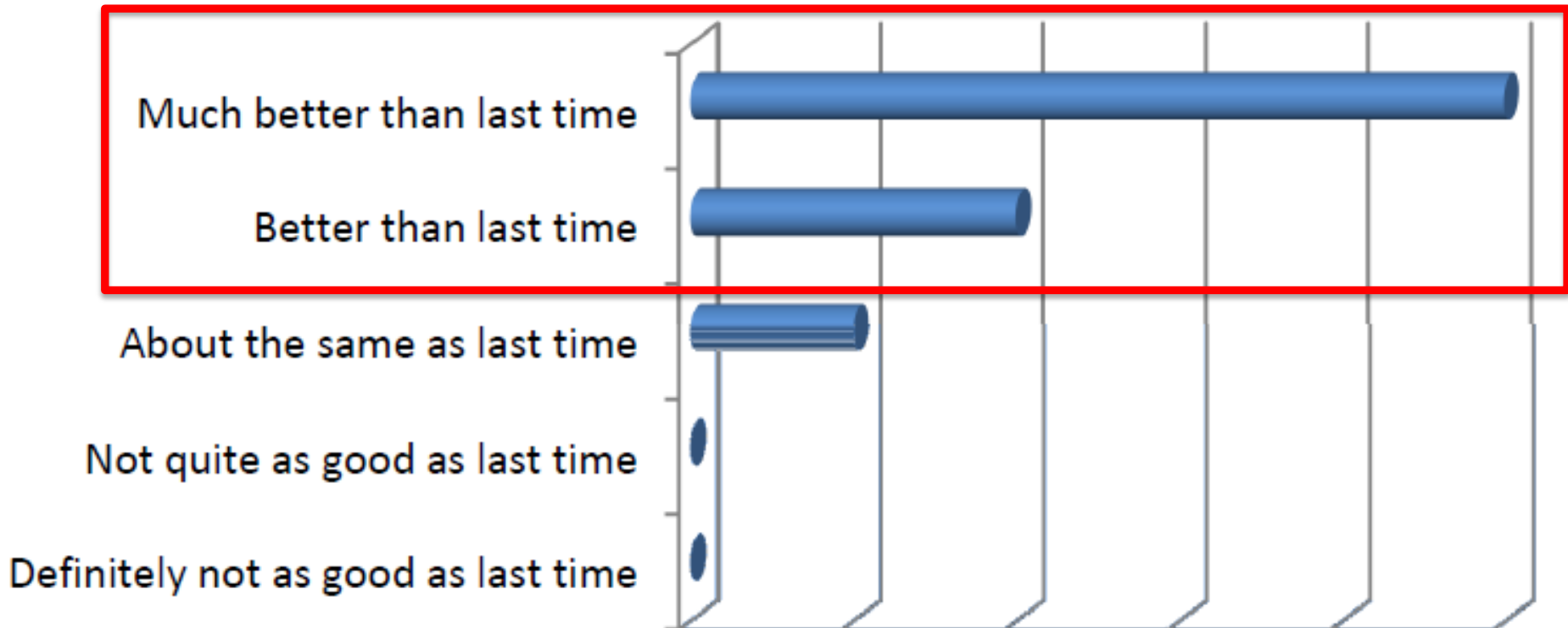
48%



82%

Opinion about addition of 'Florence' support - for women with past experience of PIH

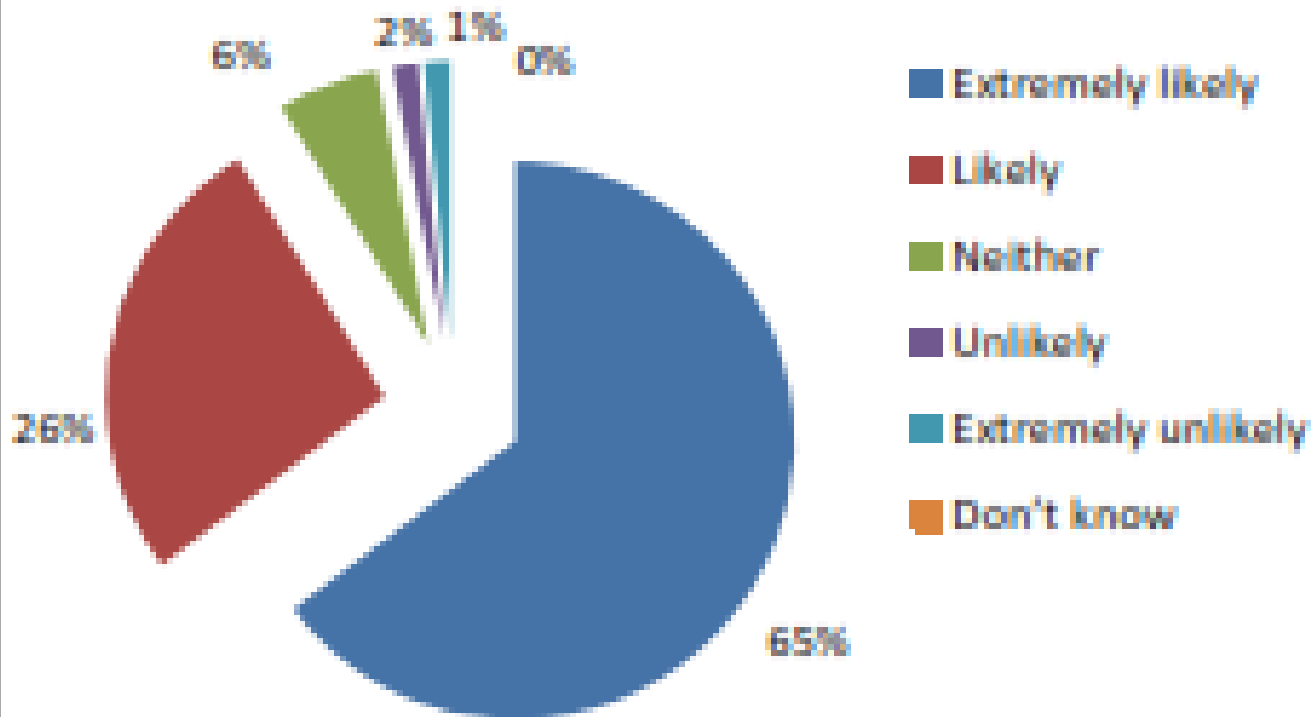
Experience of Past Pregnancy vs Present



Friends & Family Test

– ‘likelihood of recommending Florence’
PIH

Patients Likelihood to Recommend.



91%

AHSN project - Health Economics

PIH & GDM - Health economics

Savings to NHS

Patient cost savings

- *Reduced travel costs for attending day unit / clinic*
- *Reduced childcare costs / time off work*

Additional potential cost savings

- *Reduced mileage costs for community midwives (especially for rural community services)*
- *Reduced carbon footprint for NHS & patients*

The NHS Maternity Tariff – mandated in 2013

- Funding for a patient is ‘fixed’ at 1st booking visit
- There are x3 levels of antenatal funding:
 - no increase in funding if risk increases in pregnancy even if ↑ monitoring & visits required (eg if develops GDM or PIH)
 - In-built adjustments to allow for these changes, may or may not be adequate....

Level	2013-14	% pregnancies
Standard	£1,076	65.5%
Intermediate	£1,722	27.3%
Advanced	£2,865	7.1%

The NHS Maternity Tariff

- Included in the tariff...

*“The new payment approach also included some services that were previously part of local contracts and not covered by mandatory national prices, such as **community antenatal and postnatal care**. The cost of these services is now covered by the pathway payments instead”.*

The NHS Maternity Tariff

- Also included...

*“All maternity activity, for both consultant led care (**TFC 501 obstetrics**), and midwife led care (**TFC 560 midwife episode**), is included in the maternity pathway price.”*

ESTIMATING POTENTIAL COST EFFICIENCY SAVINGS IS COMPLEX USING THE FIXED NATIONAL MATERNITY TARIFF SYSTEM – THE CALCULATIONS PRESENTED ON THE FOLLOWING SLIDES ARE BASED ON ‘PER VISIT’ COST ESTIMATES’ AND THE AIM IS TO SHOW TRENDS RATHER THAN QUANTIFYING SAVINGS OR COSTS

PIH – estimating NHS efficiency/cost savings

	Sunderland	QEH	S Tyneside	JCUH/Friarage	Total cohort
Cohort size	38	8	8	25	79
Study period (weeks)	42	28	32	16	118
Total weeks of telehealth	60	28	22	44	154
Average weeks in telehealth	1.8	3.5	3.1	2.2	2.2 weeks
NHS COST SAVINGS					
Total NHS cost (historic)	£16,900	£7,536	£6,014	£9,552	£40,002
Total NHS cost (telehealth)	£13,481.72	£5,280.76	£4,240.94	£9,252.76	£32,256.18
Net savings	£3,418.28 (20.2%)	£2255.24 (29.9%)	£1,773.06 (29.5%)	£299.24 (3.1%)	£7745.82 (19.4%)
Net savings per week on telehealth	£56.97	£80.54	£80.59	£6.80	£50.30
Net savings per pregnancy	£89.96	£281.91	£221.63	£11.97	£98.05

GDM – estimating NHS cost/efficiency savings

	Sunderland	QEH	S Tyneside	Total cohort
Cohort size	59	38	22	119
Study period (weeks)	51	45	36	132
Total weeks of telehealth	678	240	230	1148
Average weeks on telehealth	11.5	8.0	10.5	9.7 weeks
NHS COST SAVINGS				
Total NHS cost (historic)	£95,516.37	£22,607.82	£35,065.80	£153,189.99
Total NHS cost (telehealth)	£91,492.19	£22,347.93	£27,725.14	£141,565.26
Net savings	£4,024.18 (4.2%)	£259.89 (1.2%)	£7,340.66 (20.9%)	£11,624.73 (7.6%)
Net savings per week on telehealth	£5.94	£1.08	£31.92	£10.13
Net savings per pregnancy	£68.21	£6.83	£333.67	£97.69

GDM – estimated ‘Patient’ cost savings

PATIENT COST SAVINGS				
Total patient cost (historic)	£15,571.36	£ 2,503.03	£6,166.30	£24,240.69
Total patient cost (telehealth)	£13,709.56	£ 2,503.03	£4,378.07	£20,590.66
Net savings	£1,861.80 (12%)	£0.00 (0%)	£1,788.23 (29%)	£3,650.03 (15.1%)
Net savings per week on telehealth	£2.75	£0.00	£7.77	£3.18
Net savings per pregnancy	£31.56	£0.00	£81.28	£30.67

'Fixed costs' excluded from model

- Annual 'Florence' licence £9,000 (inc VAT)
- Initial cost of BP machines £131-88
(£95.66 – bulk)

Problems / Limitations

- Estimating & realising true NHS costs can be difficult.....
- Embedding new service & maximising use of telehealth requires 'champions'..... to encourage and manage change

Breastfeeding pilot – use of ‘Florence’

- April – June 2015
- Total deliveries 787
- Initiated breastfeeding 434 (55%)
- B/F on discharge home 342 (44%)
- [inc ‘exclusively’ B/F on discharge 298 (38%)]

Total B/F on discharge home 342

- Opted into ‘Flo’ 198 (58%)
- Still using ‘Flo’ at 7 weeks 103 (30%)

Breastfeeding pilot – use of ‘Florence’

- April – June 2015

<u>Total B/F on discharge home</u>	342
• Opted into ‘Flo’	198 (58%)
• Still using ‘Flo’ at 7 weeks	103 (30%)

Total length using ‘Flo’

- Mean: 37 days (5 weeks 2 days)
- Range: 2 to 56 days (8 weeks 0 days)

Breastfeeding pilot – use of ‘Florence’

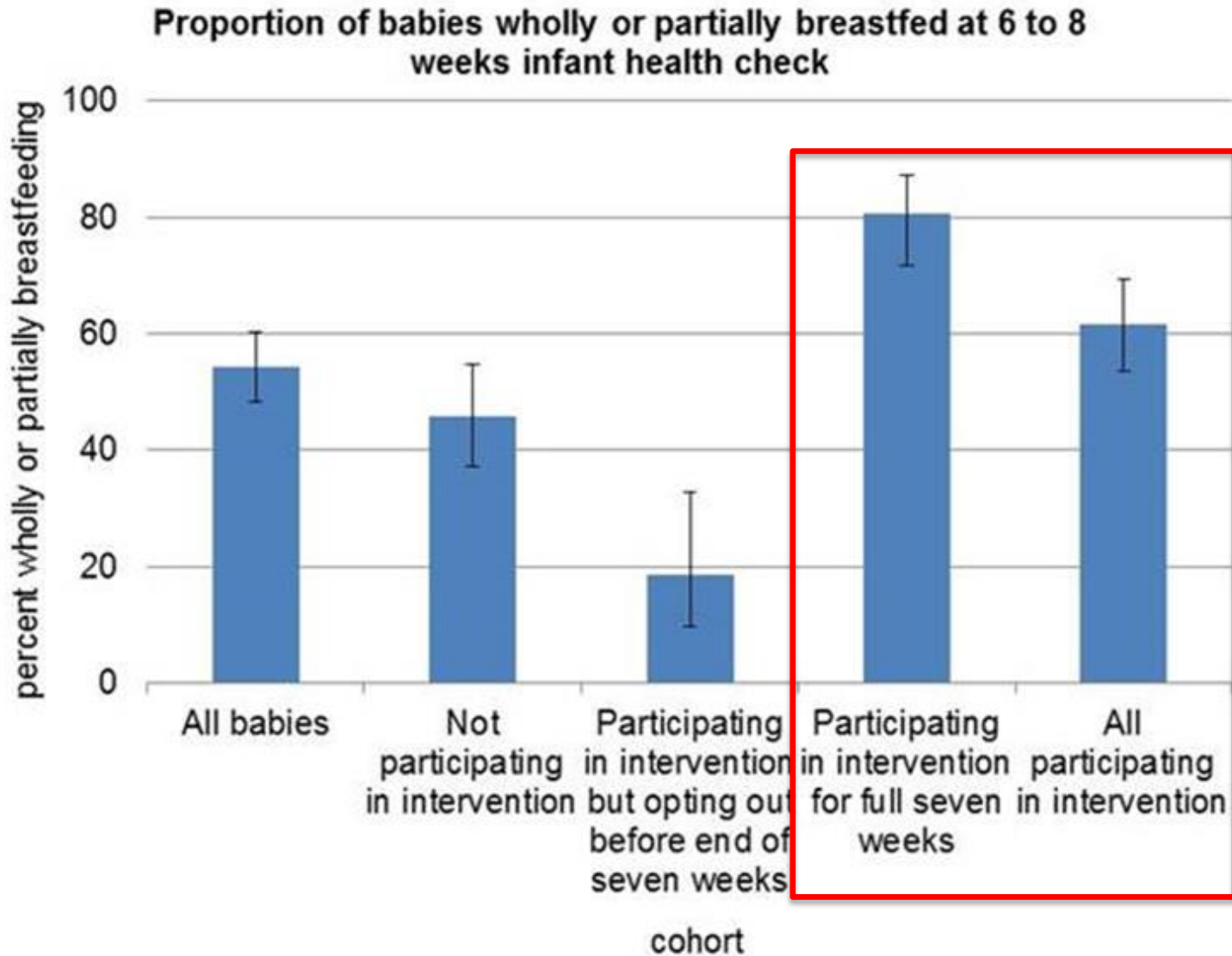
- April – June 2015

<u>Total B/F on discharge home</u>	342
• Opted into ‘Flo’	198 (58%)
• Still using ‘Flo’ at 7 weeks	103 (30%)

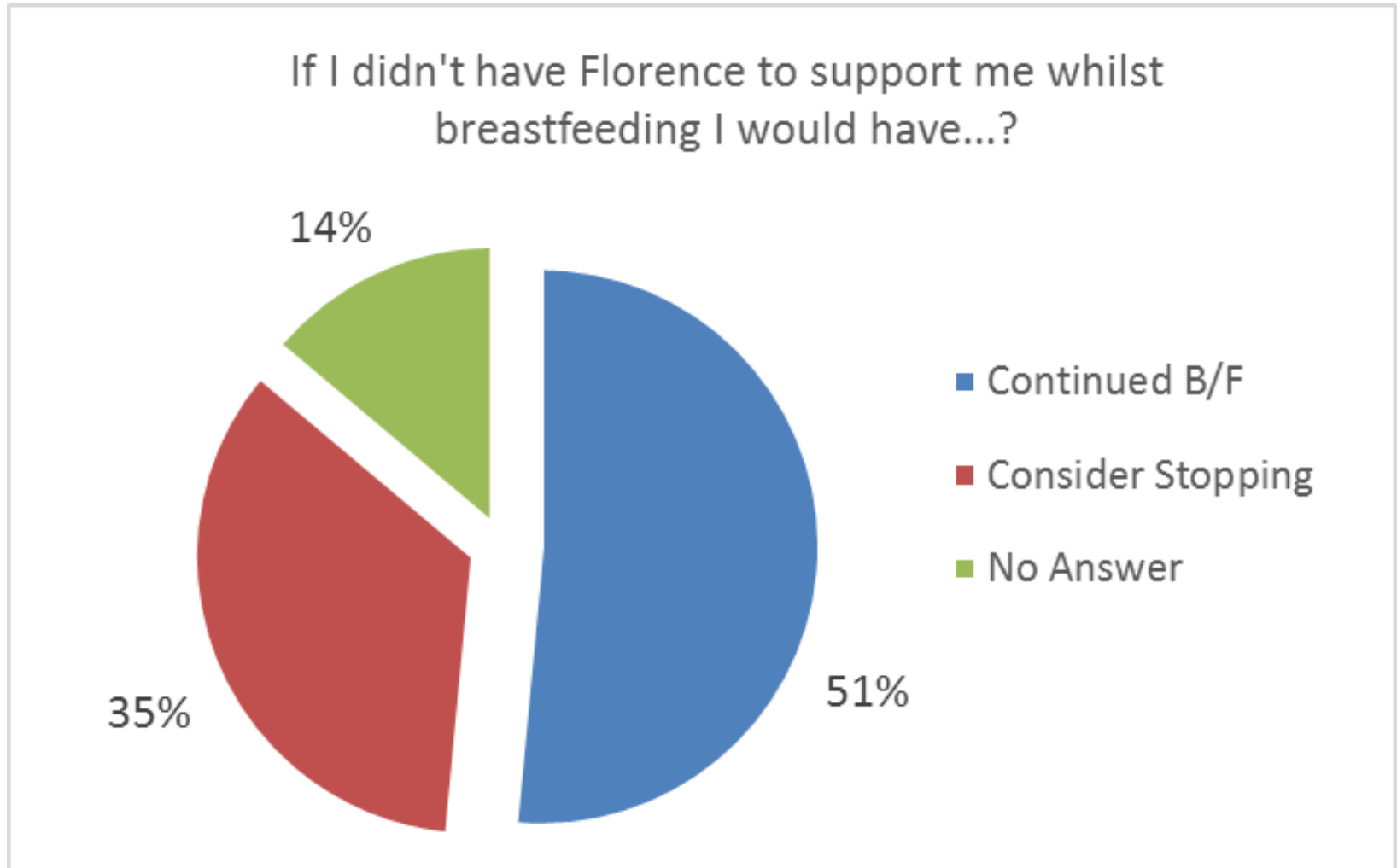
B/F rates at 7 weeks

- Didn't use ‘Flo’ (n=144)
- Opted into ‘Flo’ (n=198) :-
 - a) Using ‘Flo’ at 7 weeks (n=103)
 - b) Stopped ‘Flo’ < 7 weeks (n=95)

Breastfeeding pilot – use of ‘Florence’



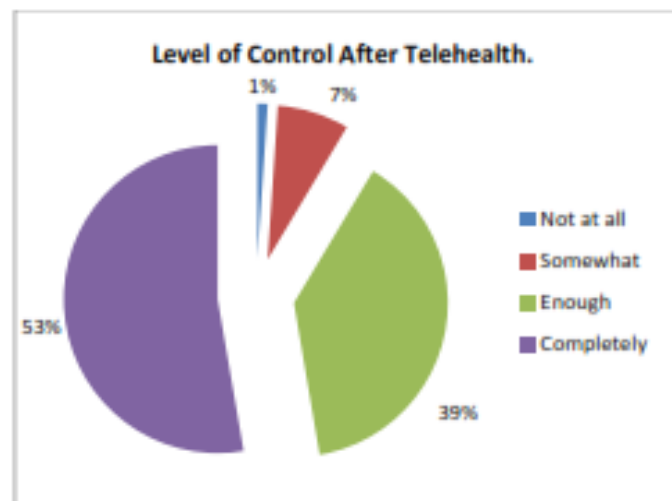
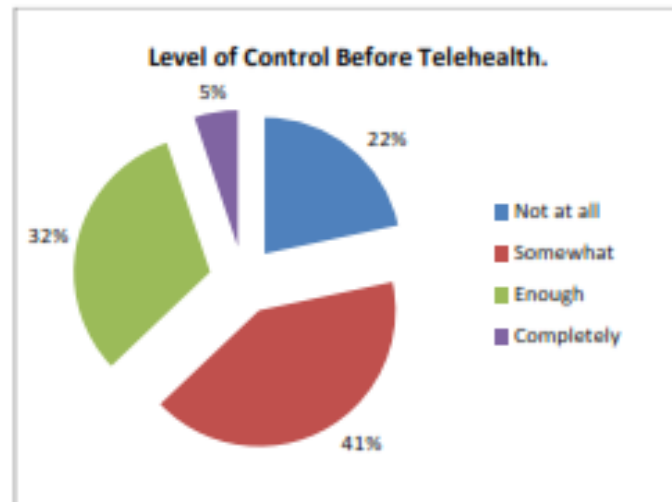
Perceived influence of 'Florence' & persistence with breastfeeding



n = 101

'Level of control' – pre vs post 'Florence'

Breastfeeding



37%

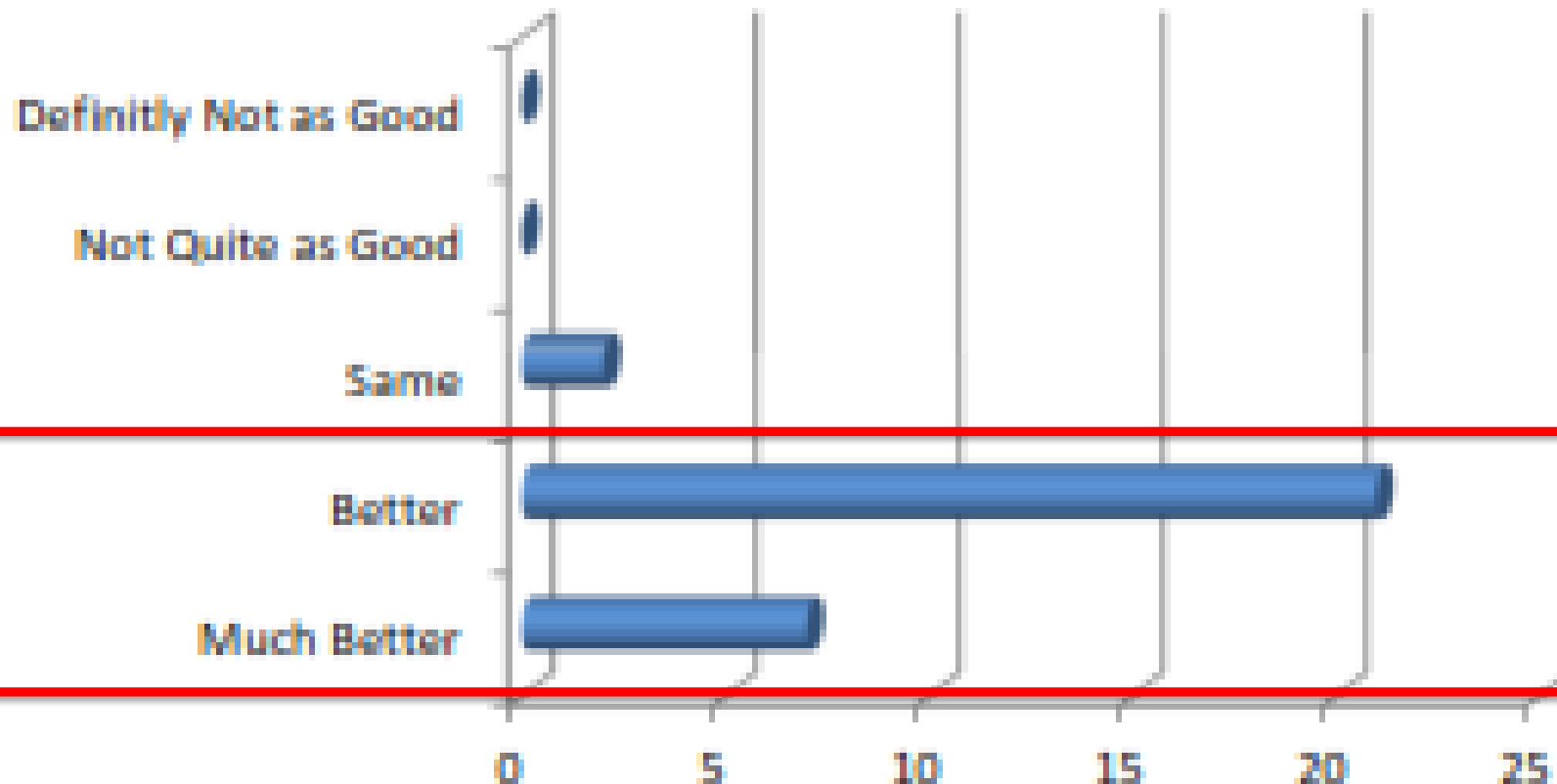


92%

Paired t-test
 $p < 0.001$
(highly significant)

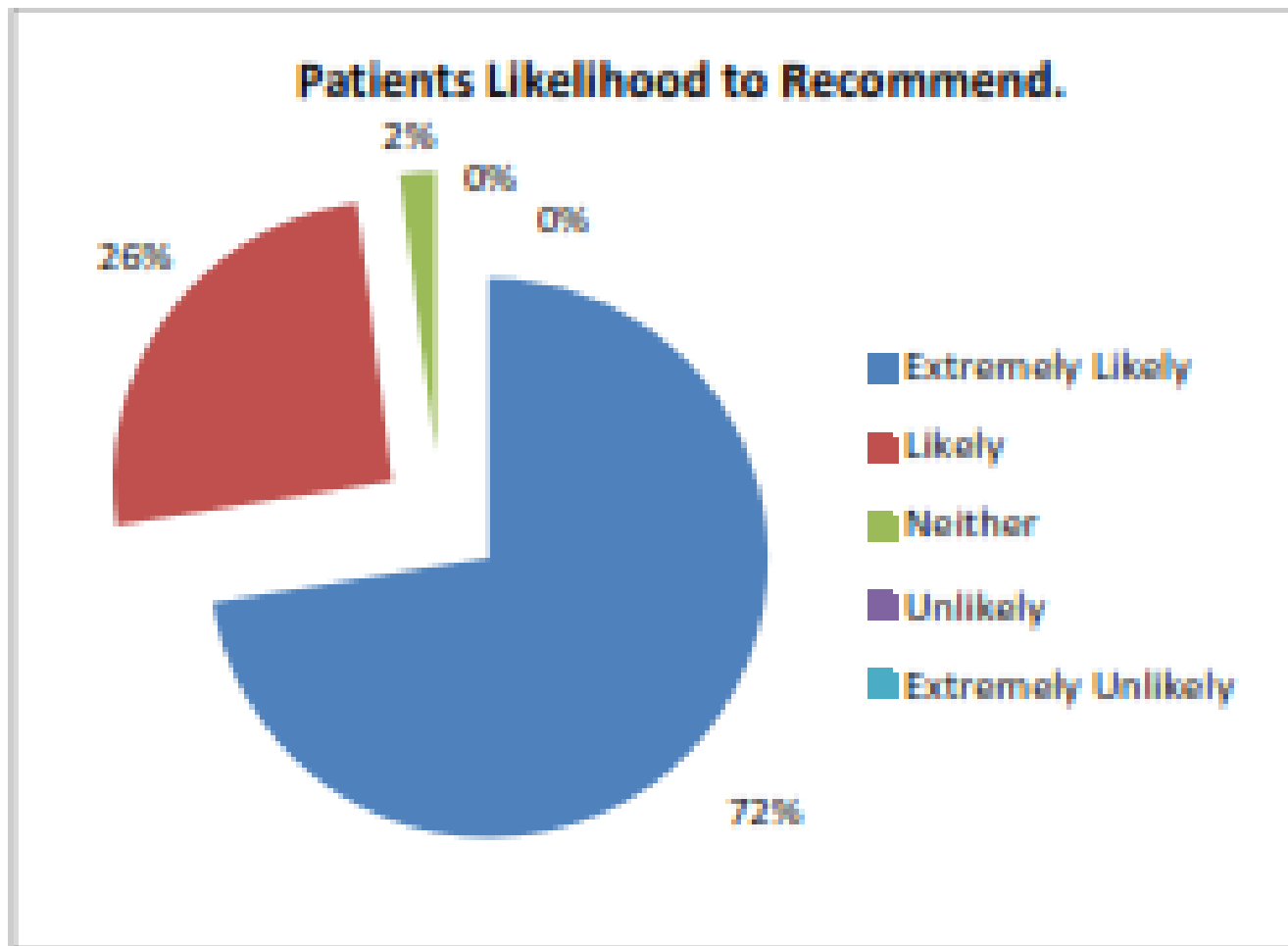
Opinion about addition of 'Florence' support - for women with past experience of breastfeeding

Experience of Past Breastfeeding vs Present.



Friends & Family Test

– ‘likelihood of recommending Florence’
Breastfeeding



98%

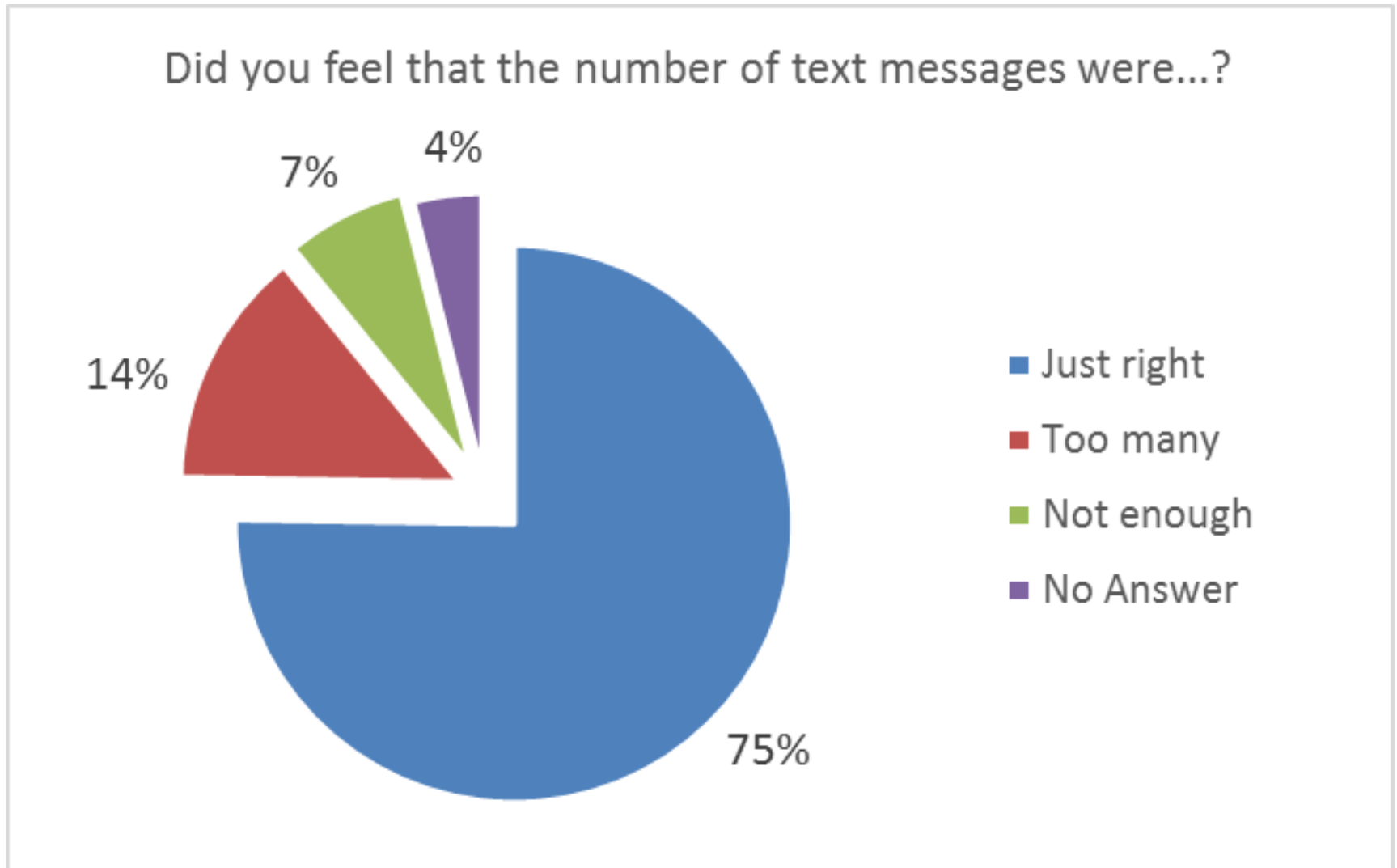
Breastfeeding – Florence ‘satisfaction’

Strongly Agree	5	4	3 Not Sure	2	1	Strongly Disagree	Average Satisfaction Score	Most common outcome
1. I felt staff gave me enough information so I knew how to use Florence							4.62	5
2. I felt staff did not give me enough support whilst I used Florence							4.47	5
3. I did not feel comfortable using a mobile phone with Florence							4.46	5
4. I did not feel confident with Florence protected my personal information							4.36	4
5. Florence was easy to use							4.58	5
6. It was better having Florence as well as having breastfeeding support							4.43	5
7. I feel that using Florence to support breastfeeding was safe							4.51	5
8. Florence did not help me to manage my own health better							3.87	4
9. I feel I understood more about breastfeeding because I used Florence							4.19	4
10. The lack of human contact when I used Florence did bother me							4.20	4
11. Florence saved me time							3.82	4
12. I felt more anxious after using Florence							4.33	4
13. Florence helped me stick with breastfeeding							3.92	4
14. Communication with my breastfeeding support was better because I used Florence							3.52	4
15. I feel Florence should become a standard service in breastfeeding support in the future							4.47	5
Overall questionnaire score (Max 75)							62.91	61

Mean (range) score = 63 (45-75)

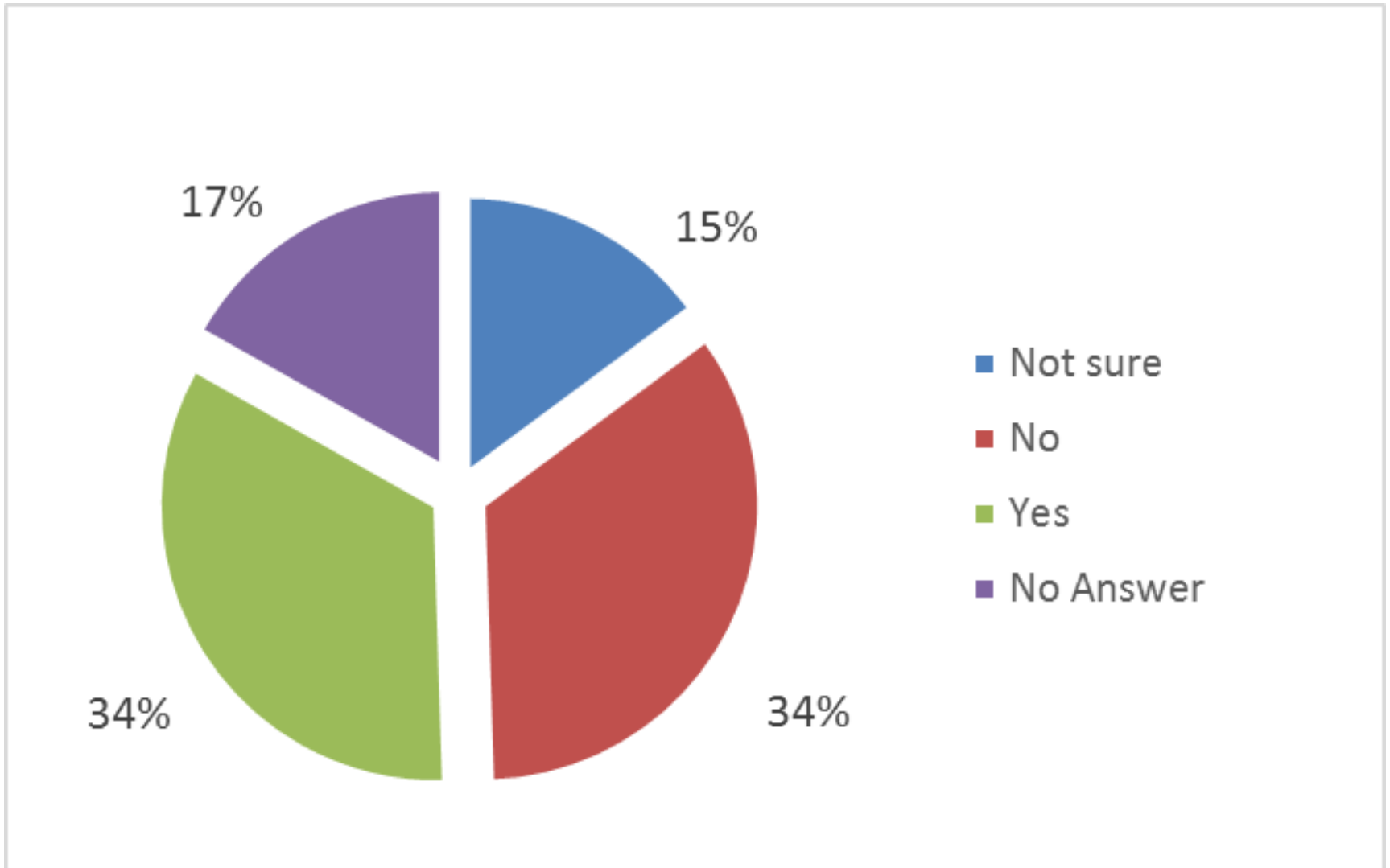
[where maximum score = 75]

Numbers of text messages received



n = 101

Would you have liked to use Florence longer?



n = 101

Potential for 'Florence' in pregnancy

- Increasing patient control & interest in own health
- Future health benefit – encourages self-monitoring of own BP and weight control in later years?
- Use in other areas of pregnancy care (eg breastfeeding support)

Summary

1. Patient-delivered home monitoring for mild PIH, GDM & breastfeeding using simple SMS is realistic & deliverable
2. Pregnant women find the technology easy to use, highly acceptable & GDM medication adjustment is practical via SMS.
3. Health economic benefits – highly dependent on the maternity tariff & may be marginal [PIH > GDM]. +ve patient cost savings – less travel & less time off work
4. Service benefits for both PIH & GDM – may allow staff redeployment
5. Implementation & embedding needs adequate training & support

City Hospitals Sunderland NHS Foundation Trust

Quality Report

Kayll Road,
Sunderland,
Tyne and Wear
SR4 7TP
Tel: 0191 565 6256
Website: www.chsft.nhs.uk

Date of inspection visit: 17-19 September and 2
October 2014
Date of publication: 20/01/2015

We saw several areas of outstanding practice including:

Sunderland Royal Hospital

- There was close collaborative working between the directorate of paediatrics and emergency medicine, which had developed a shared medical consultant staffing approach, including consultant staff qualified in paediatric emergency medicine.
- The directorate of paediatrics had facilitated the inspection of the service by a team of young service user inspectors.
- The use of the tele-health system in maternity services enabled women to monitor blood glucose levels and blood pressure in their own homes avoiding unnecessary visits to hospital.
- The compassion expressed to families if their family member died whilst on the critical care unit. For example, - nurses placed a locket of hair and the rings of the patient in a small silver bag and handed a printed card to the family with sympathy from the staff at the critical care unit.

Thank you

... and thanks to the wider project team...

Clinicians – doctors, midwives & specialist nurses
CCG support

Sunderland University – Ian Smith, Ashleigh Evans, Scott Wilkes
Health economics – Andrew Smith
NE&NC AHSN

Weblinks

- Stoke CCG – ‘Simple Telehealth’:
www.digitalhealthsot.nhs.uk
- NHS England TECS resources for Commissioners:
<http://www.england.nhs.uk/ourwork/qual-clin-lead/tecs/>