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NHS Foundation Trust

Oxford

**Patient  
Safety  
Collaborative**


**TELEHEALTH**


**Go FLO!**





**Empowering Women to Self Monitor at Home**

by  
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 Department of Health

 West of England  
Academic Health  
Science Network




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## Background

- Pregnancy induced hypertension (PIH) affects 6-8 % of pregnant women.
- Frequent monitoring and timely intervention is required to prevent serious consequences like preeclampsia, intrauterine growth restriction, placental abruption and intrauterine fetal death

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- Weekly monitoring in mild hypertension.
- Biweekly in moderate hypertension.



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## Implications for patient

- Taking time off work
- Arrange for child care
- Arrange for transport/Pay for car park
- Wait in DAU/GP/MW clinic to be seen



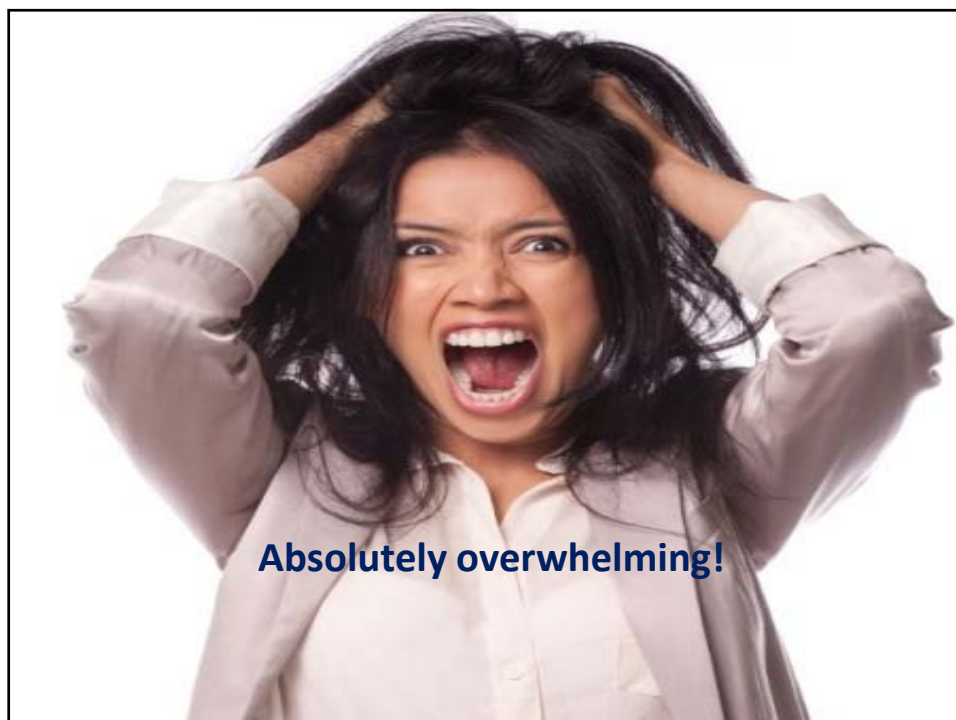
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## Implications for Health services

- Cost and Capacity!
- 10,000 (appx) attendances per year in DAU
- 2200 (appx) for BP check
- 1250 p.a BMI clinic
- Fortnightly BP check from 28 weeks



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## What's the solution?

# Simple

TELEHEALTH

Florence

FLO' (text based telehealth system) can offer a convenient, efficient and cost effective solution for this frequent monitoring of blood pressure. [Video](#)

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## Florence

respond accordingly

Runs an SMS-based simple telehealth system

Secure NHS server

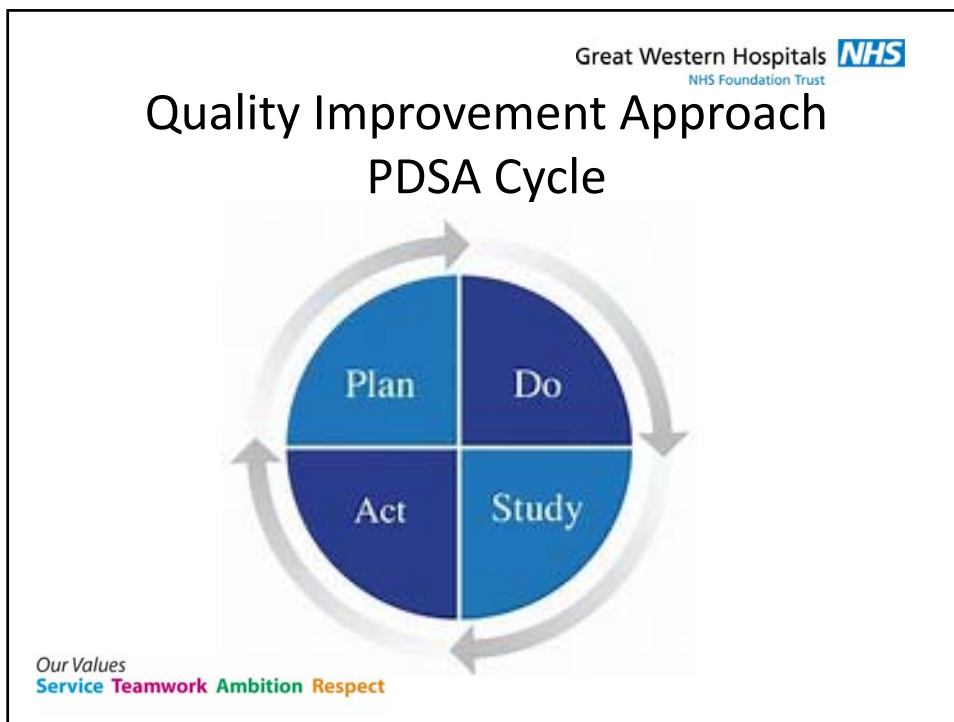
Clinicians develop the pathway & alerts

Patient SMS back (BP, reading/ Urine dipstick)

Clinicians review reading/alerts (office computer)

Go Flo Fridays  
#SelfMonitor

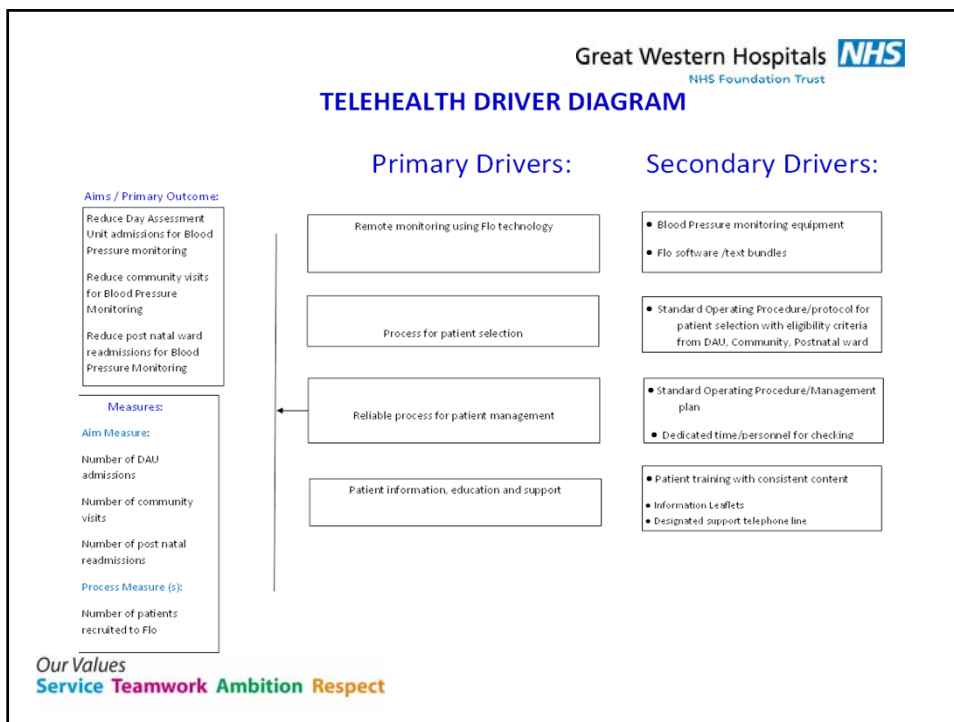
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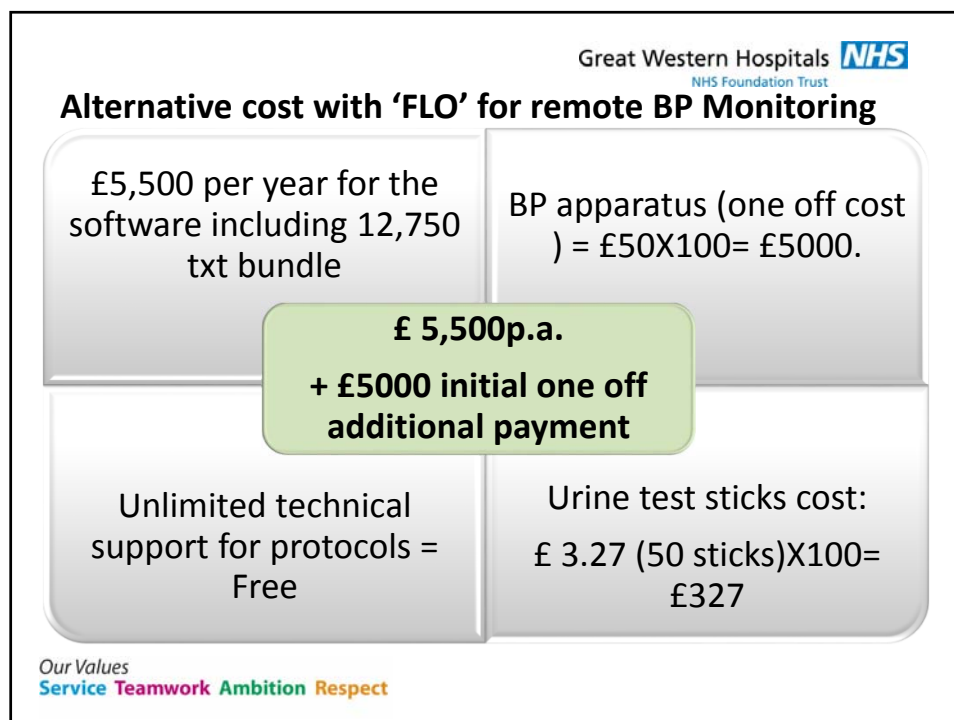
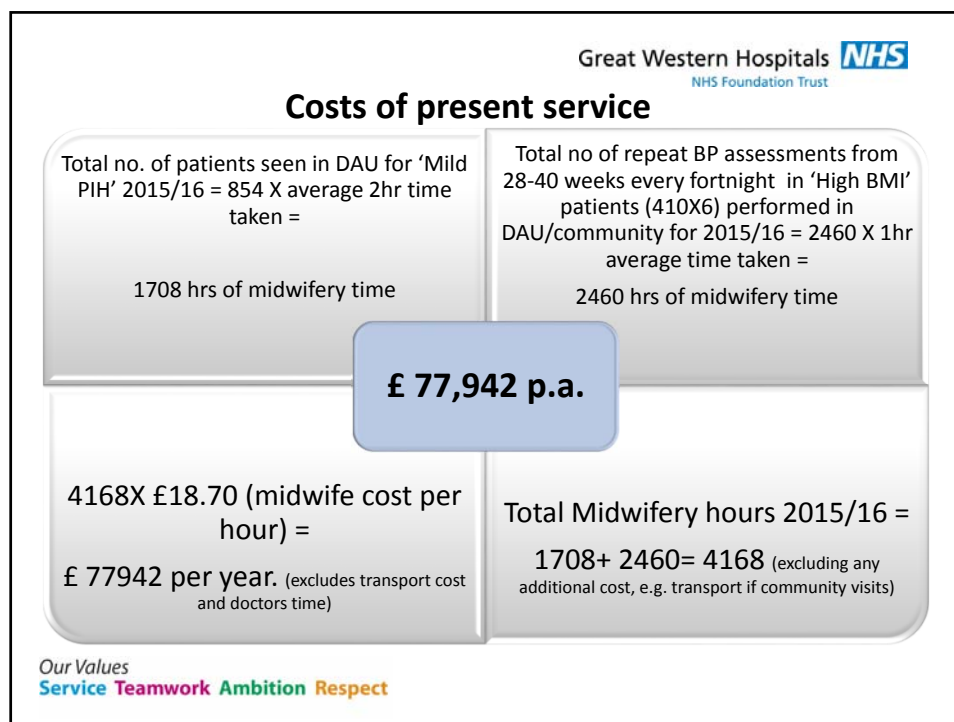
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<div style="border: 1px solid gray; border-radius: 15px; padding: 10px; background-color: #f0f0f0; margin-bottom: 10px;">Plan</div>	<ul style="list-style-type: none"> <li>Use FLO technology/Remote blood pressure monitoring in suitable women with Pregnancy induced Hypertension and in women with raised BMI.</li> </ul>
<div style="border: 1px solid gray; border-radius: 15px; padding: 10px; background-color: #f0f0f0; margin-bottom: 10px;">Aim</div>	<ul style="list-style-type: none"> <li>Improve patient satisfaction</li> <li>Reduce workload on primary and secondary care</li> </ul>
<div style="border: 1px solid gray; border-radius: 15px; padding: 10px; background-color: #f0f0f0; margin-bottom: 10px;">Objective /outcome</div>	<ul style="list-style-type: none"> <li>Involve patients as partners in their own healthcare</li> <li>To reduce repeated patient attendance at Maternity DAU for BP monitoring in suitable cases by 30 percent.</li> <li>To reduce midwifery visits in the community for BP monitoring</li> </ul>


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- ## Ground work
- Identify stake holders
  - Business case
  - Funding
  - Protocols
  - Trainings
  - Project support and timeline
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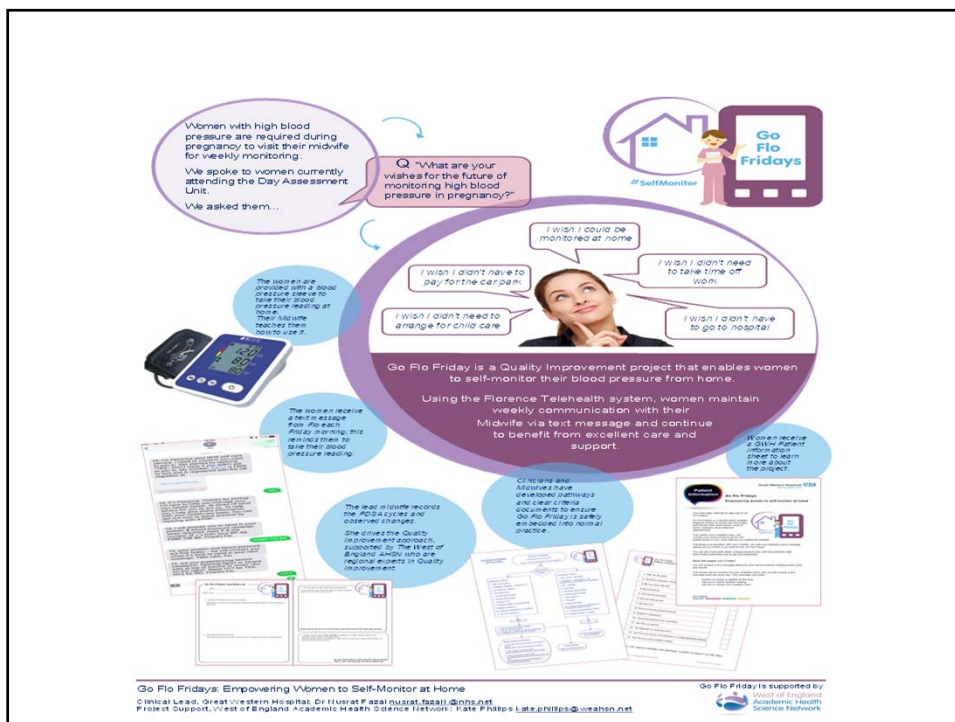


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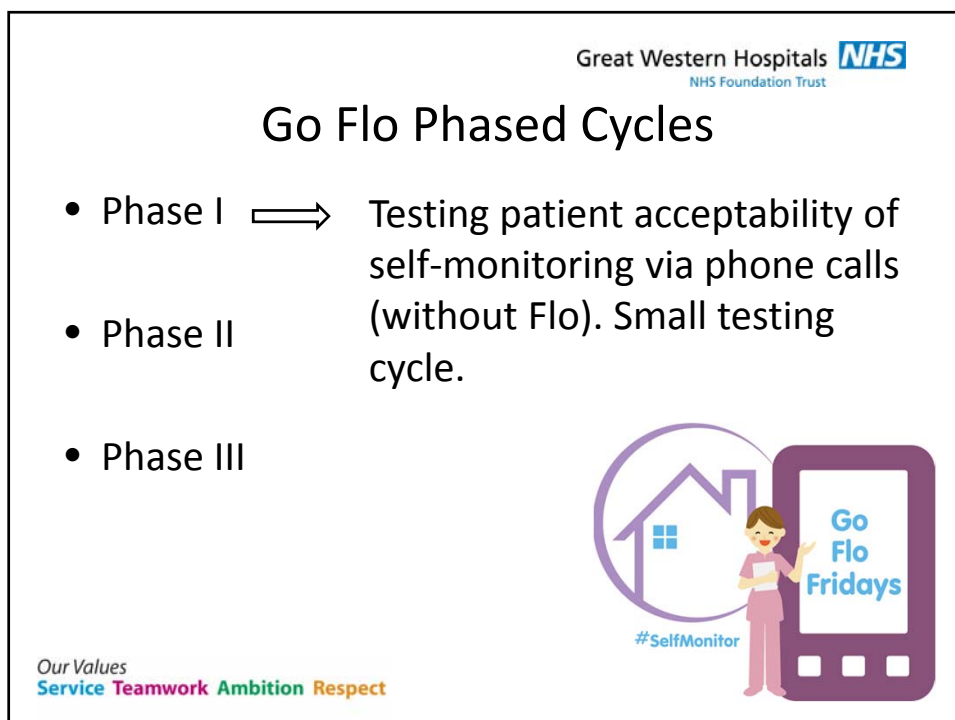
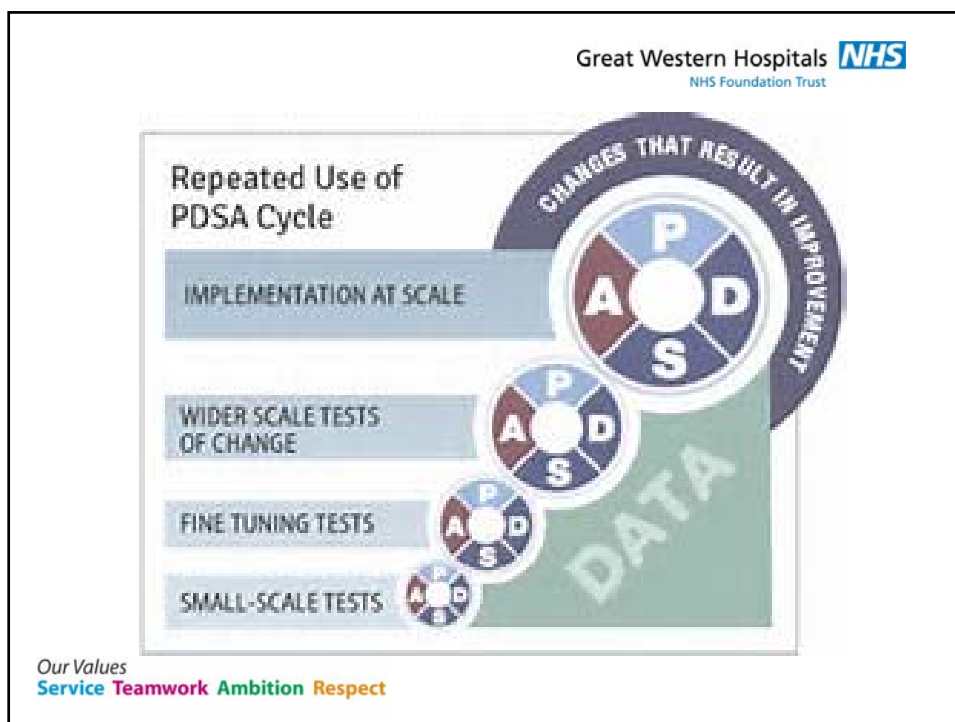
**Total Savings = existing system cost - Proposed system cost**  
**77,942-10,827**  
**£67,115 P.a.**  
**Projected saving over 5yrs = £335,575**  
**Even more if used for other areas**


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## Go Flo Phased Cycles

- Phase I
- Phase II  $\implies$  Using Flo for borderline/mild HTN or previous PIH history, to replace F2F appointment in community/DAU
- Phase III




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## Go Flo Cycles Phased

- Phase I
- Phase II
- Phase III  $\implies$  Using Flo for moderate PIH on medication (single drug) to replace one of the NICE-recommended bi-weekly monitoring in community/DAU



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## How we measure the change

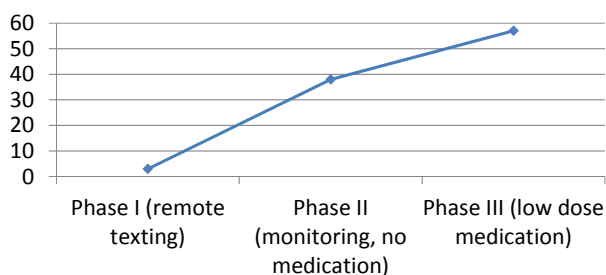
- **Process measures** : no. of patients signed up to 'Flo'
- **Outcome measures**: reduction in routine F2F appointment DAU & community
- **Balancing measures**: no. of adverse incidents
- **Patient satisfaction** survey pre and post change
- QI toolkit – “modify and retest”
- Roll out



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## Results (1/4)


No. of Women recruited  
(14 Jul 17 – April 18) : 57




— No. of Women recruited

Number of adverse incidents = 0

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## Results (2/4)



#SelfMonitor

**Patient experience:**

- 100% rate the service 'excellent' or 'very good' |
- 100% would recommend Flo to friends and family


"Being able to monitor my BP at home was fantastic, the support provided was so valuable"

"[Flo] provides extra reassurance for myself at home especially as living a distance away"


"This service is amazing & worth it's weight in gold."

"Being able to test my BP has given a true reading, coming into hospital would have negatively impacted on this"

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## PATIENT FEEDBACK



#SelfMonitor

Having the opportunity to take part in this telehealth trial has been fantastic and made such a difference to my 2<sup>nd</sup> pregnancy. Due to severe **white coat hypertension**, my BP readings were high in a medical setting. However when using the monitor at home, the readings were normal.

Testing was quick and easy. I also think the method of texting the data in is effective. I knew if I was concerned or need help, I could phone DAU.

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## Results (3/4)

### Reduction in Face-to-face appointments:

	DAU & Community –Apptts saved	DAU & Community –MW hrs	Cost saving equivalent (per MW time )	Cost Saving per MW/DAU apptt( £70)
Phase I	n/a	n/a	n/a	n/a
Phase II	496	992	£18,550	£27,630
Phase III	76	152	£1421	£1710
Total	572	1144	£19,971	£40,0040

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## Conclusion

- **Patients**
  - Patient Feed back is self reflective
  - Convenient
  - Safer/reliable
  - Economical
  - Practical
- **Trust/Staff**
  - Workload more manageable
  - efficient use of resources
  - staff satisfaction
  - savings in long term

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**Nice Compliant**

  
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## Results (4/4)

- **Staff lessons learned:**

- Having confidence with the GO FLO system
- Reduction in appointments in the community setting for ladies
- Returning equipment to DAU

“The system will identify any problems with a ladies BP/Urine & encourage them to phone DAU/D/S for advice”

“Sending text messages to women via Flo has helped to bring back equipment to DAU at delivery”

## Next steps

- Further PDSA cycles to extend its role to mild PET
- Implementing Go Flo in maternity as ‘business as usual’.
- Expand the use of the Flo system to other speciality
- Disseminate evaluation report

## Explore other uses of FLO

- Diabetes
- Breast feeding
- Chronic pain
- Mental health
- Urology
- COPD
- Cardiology



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## Acknowledgements

- Prof Kim Hinshaw
- WEAHSN
- DOH
- Teresa Harding
- Ann web
- Mohamed Elnesharty

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## Useful links and Acknowledgements

- <https://www.networks.nhs.uk/nhs-networks/simple-telehealth>
- <http://www.digitalhealthspot.nhs.uk/index.php/patient-public/telehealth>
- <https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf>
- <https://www.england.nhs.uk/digitaltechnology/info-revolution/digital-roadmaps/>
- [www.simple.uk.net](http://www.simple.uk.net)
- [www.health.org.uk/flo](http://www.health.org.uk/flo)
- [Video](#)

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Thank you for listening!  
Any questions?



[Video](#)

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