

# \* Developing Digital Technology Solutions to Improve Care for Cancer Patients

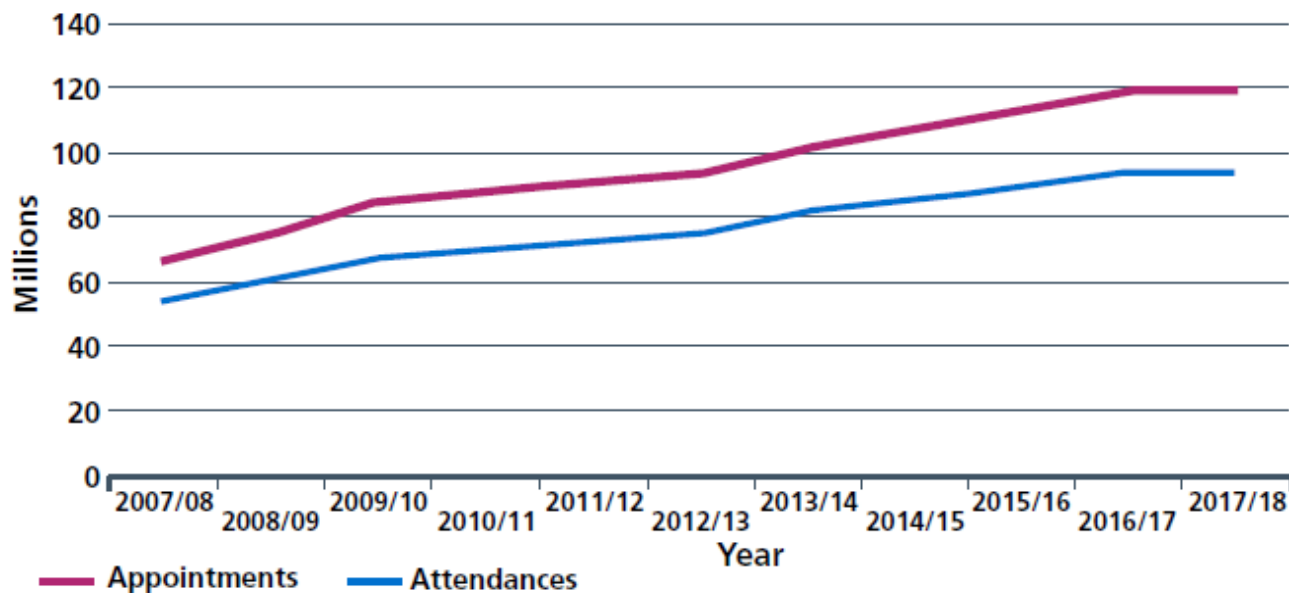
Mr Tony Bradley – Patient representative

Dr Judy Christian - Clinical Oncologist

Dr Ananth Sivanandan – Clinical Oncologist

Nottingham University Hospital NHS Trust

**Figure 7: Outpatient appointments and attendances, England, 2007/08 to 2017/18.**



**Source:** NHS Digital. Hospital Outpatient Activity, 2017-18. October 2018.

**WHY  
DIGITAL?**

## Improved Clinical Outcomes for Patients

Remove any unnecessary face-to-face follow up appointments to better target resources

## Improved Experience for Patients

Giving patients more control over their secondary care, reducing impact on their time and cost.

## Reducing Risk to Patients

Reduce Risks relating to patients that are immunocompromised by eliminating any unnecessary hospital attendances.

*“The traditional model for outpatients is outdated and unsustainable...” RCP 2018*

**20%**

of pensioners who attended an outpatient appointment reported feeling worse afterwards because of the stress involved in the journey alone.

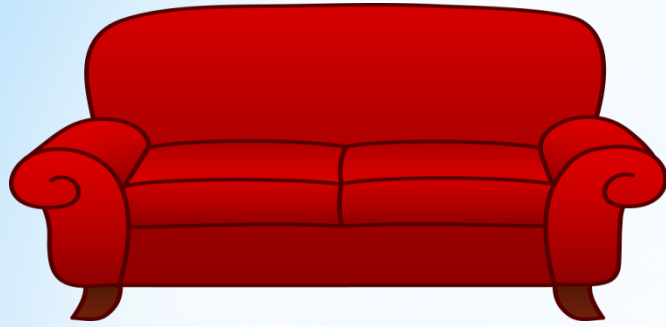
**5 %**



of road traffic in England is NHS-related.

# A m b i t i o n

If it was you having the treatment,  
what would you design?



What if you could sit  
at home, on your  
sofa, with the cat,  
drinking your tea with  
your family and have  
your consultation  
from there?



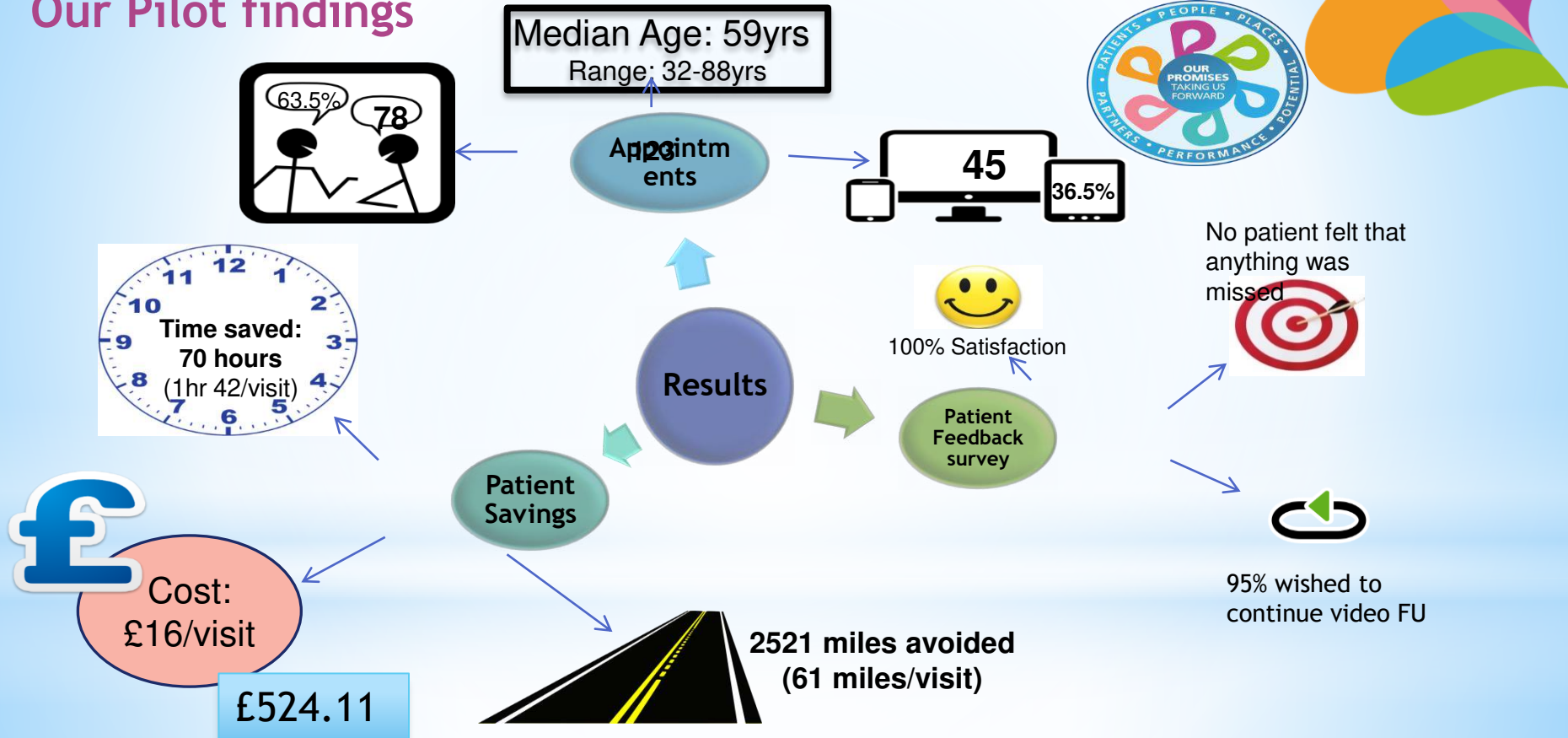
*“It is very silly what I am going to say but when you come out of the hospital, everyone is busy in their own lives but for you your world stops, you have nothing underneath you but you have to carry on, you have to get home. But if someone said that to me at home, then at least I am at home, I am safe, I can’t explain it.”*

Patient in video clinic



# Virtual video clinics

# Our Pilot findings



## What they told us.....



Geoffrey- 88 years old, Lincoln

*“I felt that this was a excellent way to have an appointment and enabled me to continue caring for my wife as well as receive expert care.”*

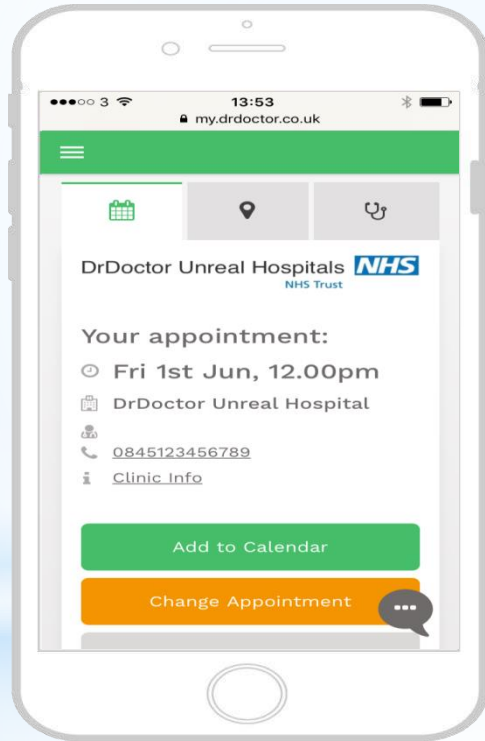
Ann- 65 years old, Northampton

*“Wonderful to be able to speak to specialists in the privacy of our own home. This relieves the stress attached to travelling to and attending clinic. Thank you for offering this service. It would have cost us £50-£60 to attend”*

# Digital PROMS clinics

Does everyone with  
something to say, need to  
say it at the hospital?

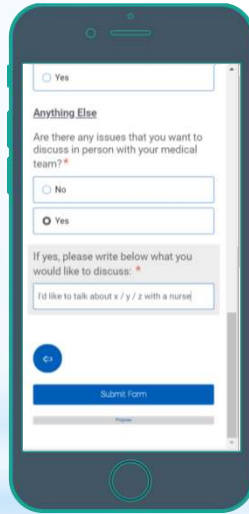
Can we assess patients online?



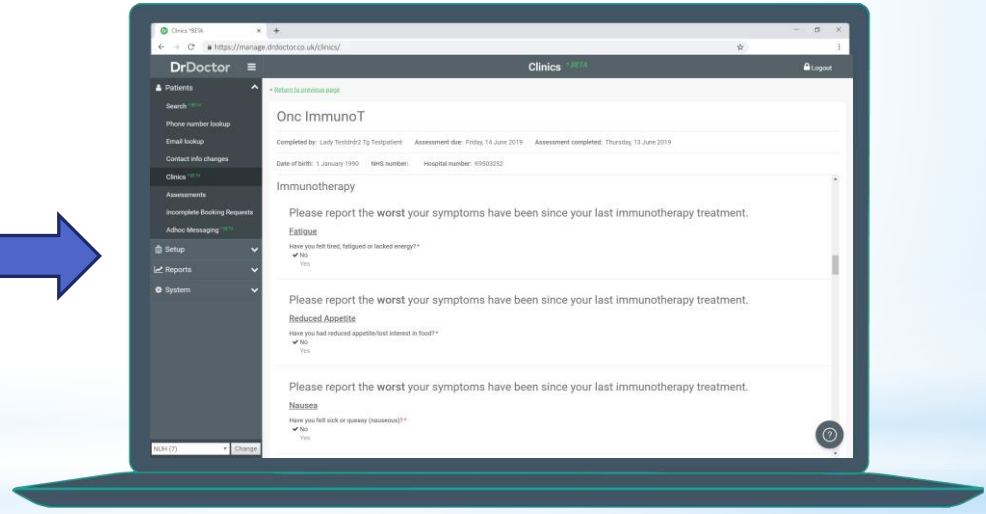
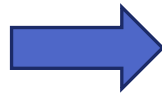
Through the  
DrDoctor portal,  
patients can access  
and answer clinical  
questionnaires,  
written by the  
clinician

.

# Questionnaires flow from Smartphone to Hospital



Patient



Clinician

# Did the questionnaires correctly flag up symptoms?

<b>Grade 2 or above</b>	<b>Clinician</b>		<i>Totals</i>
<b>Patient</b>	<b>Yes</b>	<b>No</b>	
<b>Yes</b>	44	16	60
<b>No</b>	3	27	30
<i>Totals</i>	47	43	90

**96.7% (87/90) YES!!**

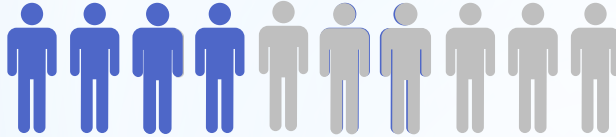
**False negative rate for patient questionnaires 3.30%  
(3/90)  
(All for low-moderate symptoms)**



# Oncology Go Live!

## Reduced face to face activity

41%



### Enrolment Rate

27 patients out of 66 patients on the pathway

99.2%



### Questionnaire Completion Rate

99.2% of patient questionnaires have been completed (118 out of 119)

95.0%

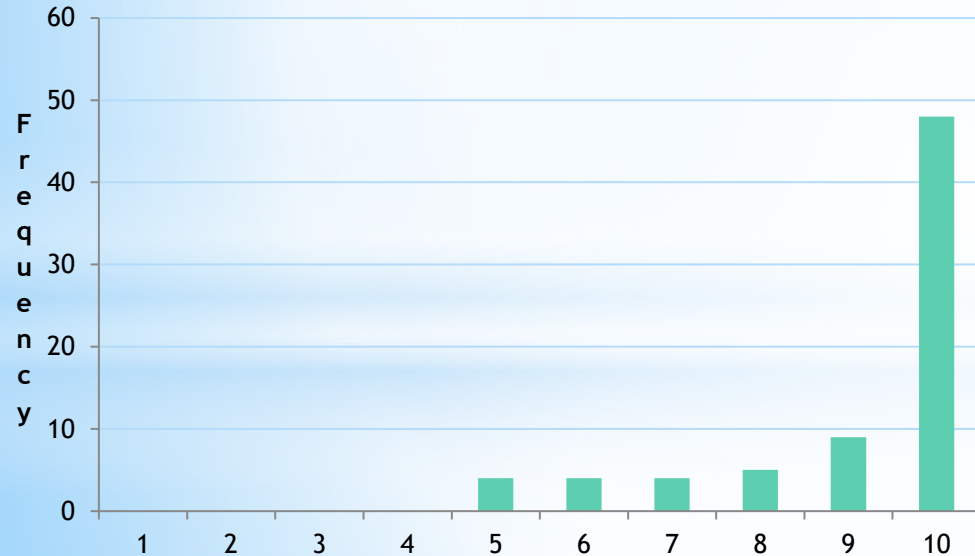


### Reduction Rate

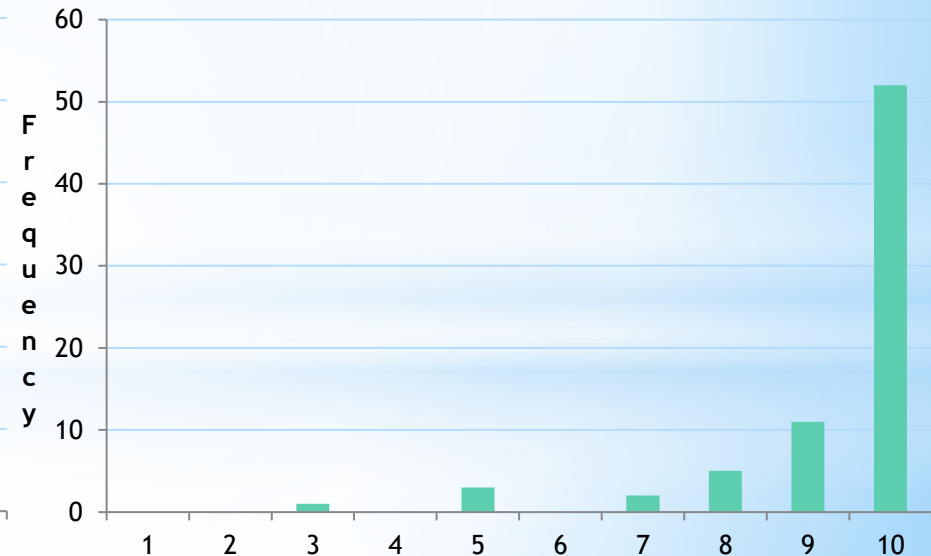
119 appointments on the digital review clinic - 113 didn't require a face-to-face follow up appointment.

# Improved Patient Experience

Q. How confident were you with reading and answering the questions on the tablet?

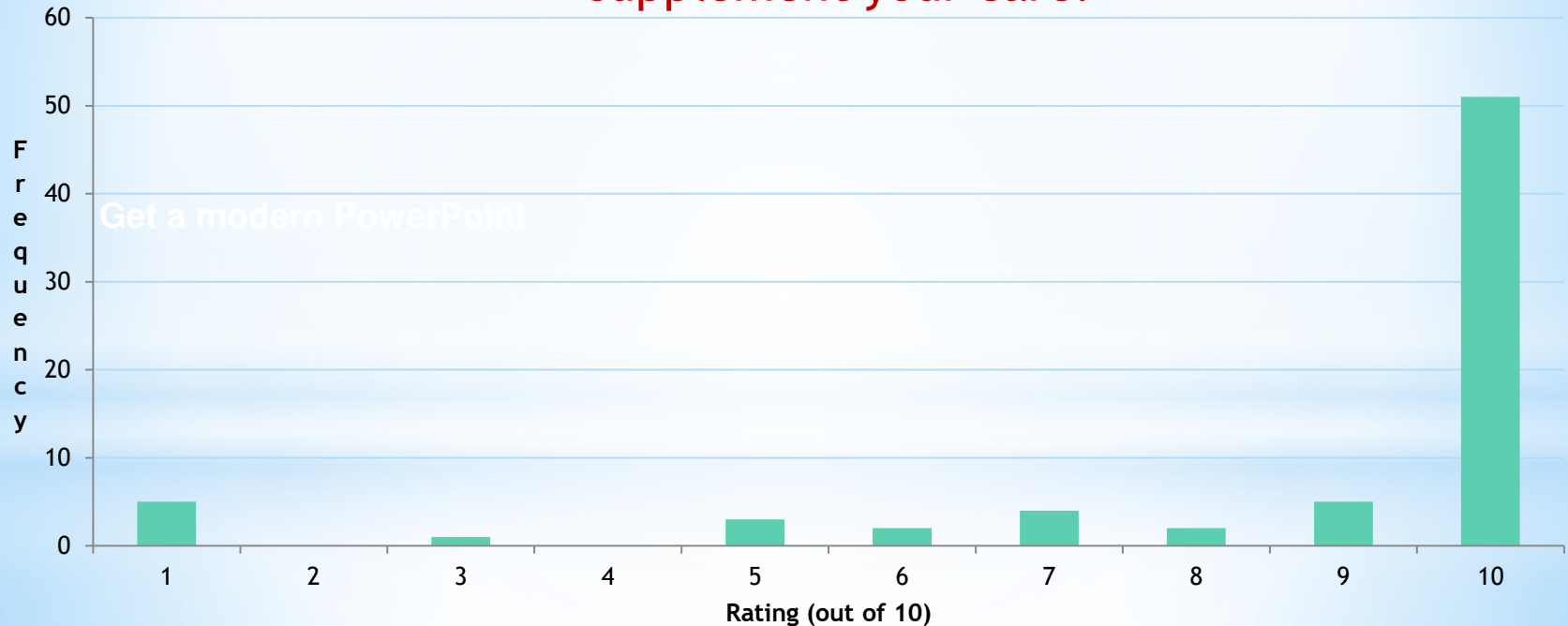


Q. Did the questions cover everything you would normally discuss at clinic?



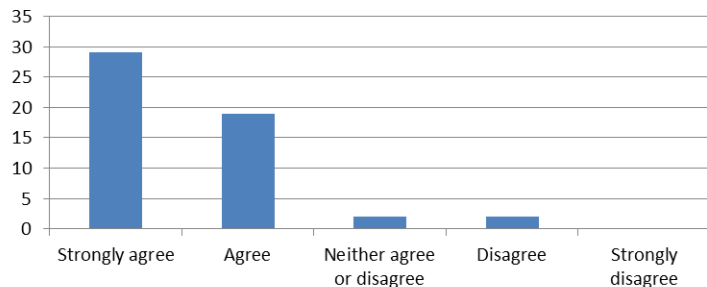
# Improved Patient Experience

Would you be happy to use these questionnaires routinely to supplement your care?

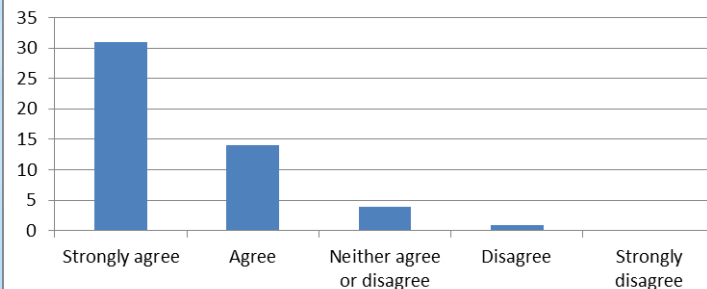


## Face to face clinic

**It was useful to attend my hospital appointment today**

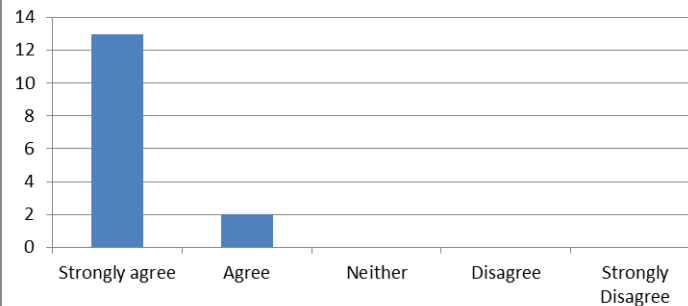


**I was satisfied with my appointment today**

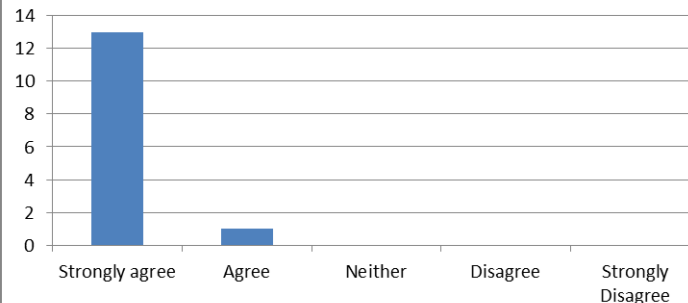


## Digital clinic

**It was useful for me to complete the questionnaire online**



**I was satisfied with my digital appointment**





- Digital questionnaires offer choices over routine care and don't replace current provision of urgent care.

# A m b i t i o n

If it was you having the treatment,  
what would you design?



- \* Dr Judith Christian
- \* Dr Michael O'Cathail
- \* Dr Ananth Sivanandan
- \* NUH My Online Care team
- \* All the patients who were willing to give it a go

Funding:  
Nottingham Hospitals Charity  
Macmillan Cancer Support  
EM Academic Health Science Network