* 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.

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“The traditional model for outpatients is outdated and unsustainable...”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.
Ambition

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

Median Age: 59yrs
Range: 32-88yrs

Appointments

Results

Patient Feedback survey

Patient Savings

Cost: £16/visit

£524.11

Time saved: 70 hours
(1hr 42/visit)

2521 miles avoided
(61 miles/visit)

£16/visit

45
36.5%

Appointments

100% Satisfaction

No patient felt that anything was missed

95% wished to continue video FU

36.5%

2521 miles avoided

123

63.5%
What they told us.....

Geoffrey- 88 years old, Lincoln

“I felt that this was an 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
Did the questionnaires correctly flag up symptoms?

<table>
<thead>
<tr>
<th>Grade 2 or above</th>
<th>Clinician</th>
<th>Totals</th>
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<tbody>
<tr>
<td>Patient</td>
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<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>44</td>
<td>16</td>
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<td>3</td>
<td>27</td>
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<tr>
<td>Totals</td>
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<td>43</td>
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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

Enrolment Rate
27 patients out of 66 patients on the pathway

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

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

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>35</td>
</tr>
<tr>
<td>Agree</td>
<td>20</td>
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<tr>
<td>Neither</td>
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</tr>
<tr>
<td>Disagree</td>
<td>5</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
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Digital clinic

It was useful for me to complete the questionnaire online

<table>
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</tr>
<tr>
<td>Agree</td>
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</tr>
<tr>
<td>Neither</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
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</tr>
<tr>
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<td>0</td>
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I was satisfied with my appointment today

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<td>Disagree</td>
<td>5</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
</tr>
</tbody>
</table>

I was satisfied with my digital appointment

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“Your work is very important to us oncology patients and I personally would like to thank you for helping to improve our journeys”

“Easy to use and understand”

I felt that I was able to give more accurate answers as I was at home with a cup of tea and had more time to consider the questions.

➢ Digital questionnaires offer choices over routine care and don’t replace current provision of urgent care.
If it was you having the treatment, what would you design?
* Dr Judith Christian
* Dr Michael O’Cathail
* Dr Ananth Sivanandanan
* NUH My Online Care team
* All the patients who were willing to give it a go

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