Background & Introduction

Telephone triage widely used in general practice

Previous research on nurse triage
– small samples
– limited numbers of practice settings

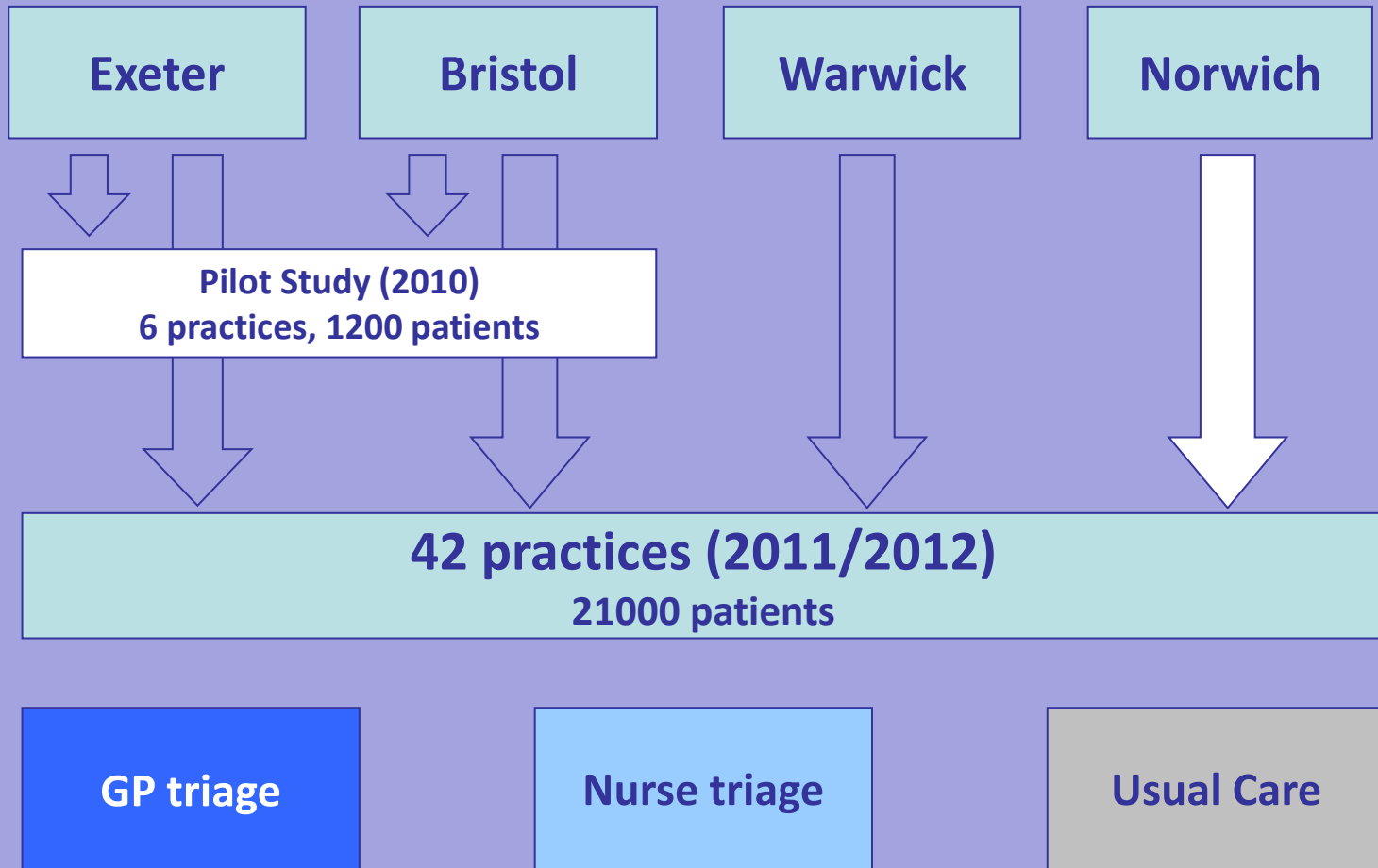Department of Health needed evidence

Research question

For patients requesting same day appointments in general practice, how do…

   (1) nurse-led computer-supported telephone triage

   (2) GP-led telephone triage and

   (3) usual care

…compare in terms of their impact on primary care workload, NHS costs, and patient reported satisfaction, health status and safety?

Methods

Inclusion & exclusion

Inclusion	Practices not already operating triage Patients telephoning to request a same-day, F2F consultation with a GP
Exclusion	Urgent/emergency care Communication problems Temporary residents 12-15 year olds

Outcomes

- **Primary:** Number of primary care contacts (GP, nurse, WIC, OOH, A&E) within 28 days of initial same-day request

- Secondary:

  (i) NHS resource use & costs within 28 days of initial same-day request

  (ii) patient satisfaction

  (iii) health status

  (iv) safety (deaths & emergency hospital admissions within 7 days, A&E contacts within 4 weeks)

Patient telephone call

Eligible for ESTEEM

NOT eligible for ESTEEM

Receptionist handles call as per procedure for intervention

Dealt with according to practice usual protocol

Clinician
Triage (or see pt in UC)
Clinician Form
Verbal consent to case notes review

Practice admin staff
Study Read code applied to pt's record

Questionnaire
sent to pts at 4 weeks (written consent to case notes review on last page)

Case Notes Review
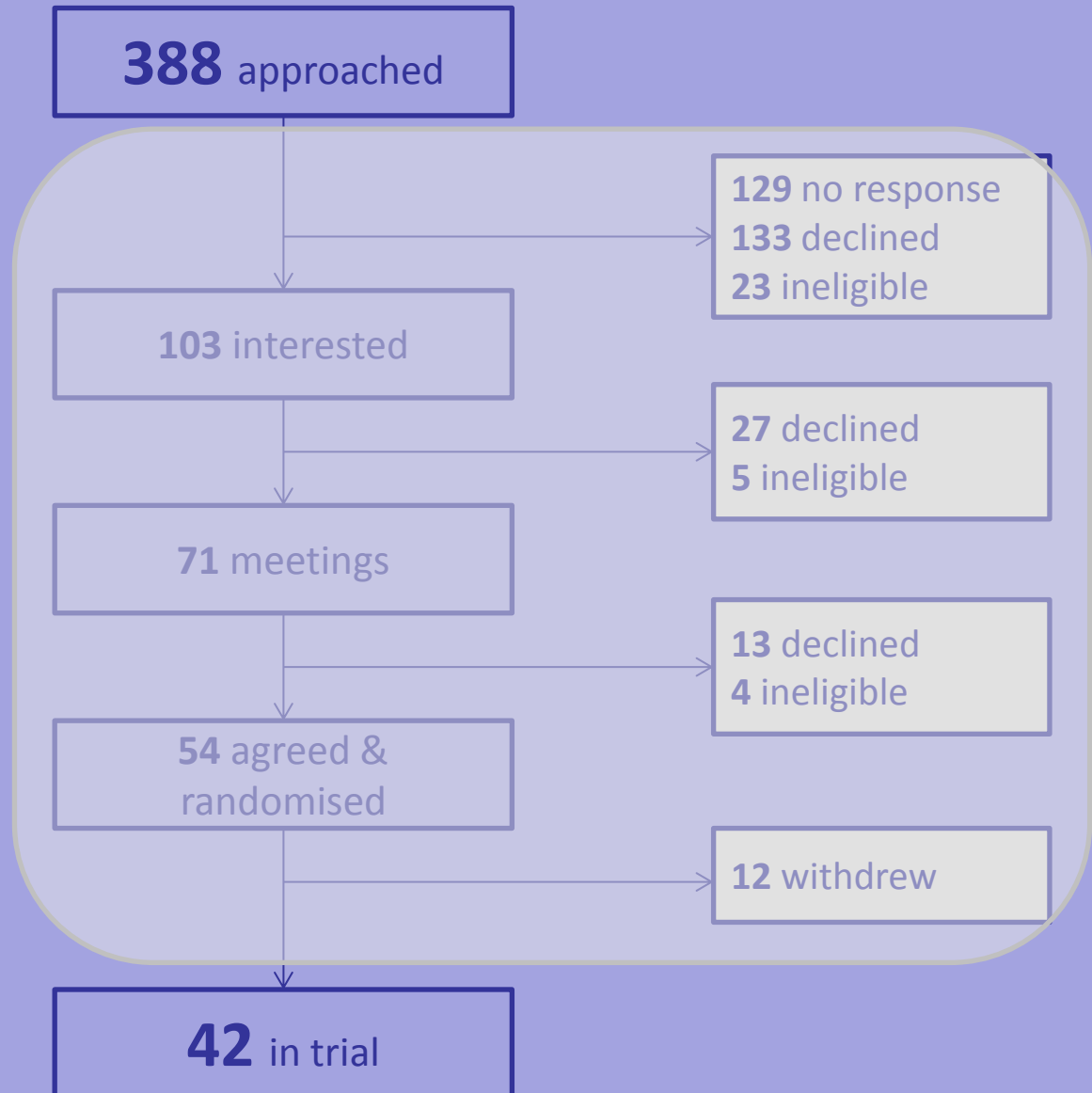Performed for consenting pts at 12 weeks

Trial outline

Results

Recruitment - practices

388 approached

129 no response
133 declined
23 ineligible

103 interested

27 declined
5 ineligible

71 meetings

13 declined
4 ineligible

54 agreed & randomised

12 withdrew

42 in trial

Recruitment - patients

22,261 requesting SD appt
(target: 21,138)

20,998 eligible and sent Q

752 12-15 year olds
511 withdrawn

8 withdrawn after Q

16,279 consented to notes review

60 notes not reviewed

16,219 in final analysis of case notes
(target: 11,253)
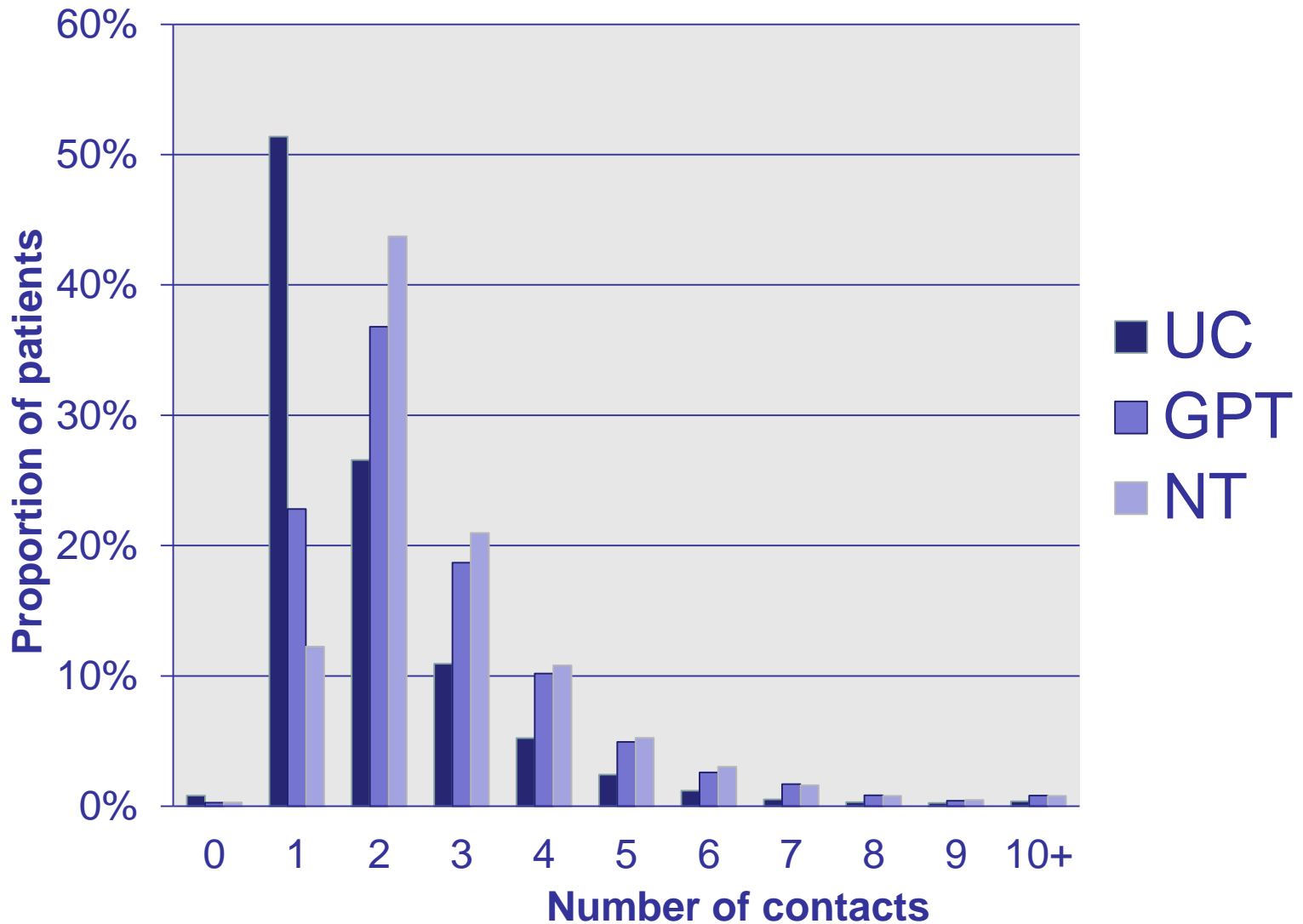
Primary outcome

Primary outcome – primary care contacts in 28 days following a same-day consultation request

	GPT v. UC	NT v. UC	NT v. GPT
Rate of primary care contacts over 28 days	↑ 33 %	↑ 48%	↑ 4%

Sensitivity Analysis (combining all index-day practice contacts into one)

	GPT v. UC	NT v. UC	NT v. GPT
Rate of primary care contacts over 28 days	↑ 10%	↑ 12%	↑ 1%

The index day

	UC N = 5572	GPT N = 5171	NT N = 5468
No contact on index day after consultation request	5%	<1%	<1%
F2F appointment only	87% (GP) 3% (nurse)	5% (GP)	8% (GP)
Triage only		46% (GP)	22% (nurse)
Triage + F2F appointment		36% (GP f2f) 9% (nurse f2f)	55% (GP f2f) 9% (nurse f2f)
Other pathways taken by very small numbers of patients			

On index day	GPT v. UC	NT v. UC
Rate of GP telephone AND GP F2F contacts	↑ 49%	↓ 28%
Rate of GP F2F contacts only	↓ 55%	↓ 31%

Duration of practice contacts on index day

First management/triage contact (mins)

	Mean (SD)
UC	**9.5** (5.00)
GPT	**4.0** (2.81)
NT	**6.6** (3.83)

GP F2F contacts following first management/triage(mins)

	Mean (SD)
UC	**9.8** (5.10)
GPT	**12.4** (7.12)
NT	**11.5** (6.43)

No evidence that telephone triage reduces the duration of subsequent F2F contacts

Estimated total patient-clinician contact duration on index day (mins)

	UC	GPT	NT
Overall	**9.6**	**10.3**	**14.8**
GP time	9.1	9.0	7.7
Nurse time	0.6	1.3	7.1

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Economic Evaluation

Is there a difference in the cost of care (primary outcome contacts) over 28-day follow-up?

	UC	GPT	NT
Mean 28-day cost (SD)	**£75.41** (57.19)	**£75.21** (65.45)	**£75.68** (63.09)

No significant difference in mean 28-day costs

Patient Experience

Patient Experience Item	Compared to UC...		Compared to GPT...
	GPT	NT	NT
Getting through on phone	✓	--	--
Receiving Prompt Care	--	✗	✗
Ease seeing a GP or Nurse	--	✗	--
Ease getting help/advice for medical problem	--	✗	✗
Convenience of care	--	✗	✗
Improvement in problem	--	--	--
Overall satisfaction	--	✗	✗

Safety

Compared to usual care is there evidence of increased risk of...?

	Within 7 days	Within 7 days	Within 28 days
GPT	✖	✖	✖
NT	✖	✖	✖

Process Evaluation

10 practices (**4** GPT, **4** NT, **2** UC)

54 staff interviews (**19** GPs, **9** nurses, **9** PMs, **17** receptionists)

45 patient interviews (**20** GPT, **19** NT, **6** UC)

Process Evaluation: themes

- No predictable patterns
- No strong and compelling narrative about what works and what does not work
- GP practices are complex adaptive systems
- Telephone triage in many contexts can be a positive experience

Conclusions

Should I introduce triage?

Summarising ESTEEM

Triage and clinician workload

- Introducing triage, whether GP or nurse led, is likely to lead to an increased rate of patient contacts in the 28 days following a same day consultation request when compared with usual care (GPT 33%; NT 48%).

- If the within-practice management on the index day is considered as a single contact, the rate of contacts increased by 10% and 12% respectively.

- Introducing GP-led or Nurse-led triage does not reduce overall clinician contact time on the index day, but Nurse-led triage does reduce GP contact time.

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	GP triage vs Usual Care	Nurse triage vs Usual Care
Patient safety		
A&E attendance rate	→	→
Admission rate	→	→
Mortality rate	→	→
Patient experience of care		
Overall satisfaction	→	(↓)
Health economics		
Cost per patient	→	→

Publications

- Campbell JL *et a*l. Telephone triage for management of same day consultation requests in general practice (the ESTEEM trial): a cluster-randomised controlled trial and cost-consequence analysis. *Lancet* 08/2014; DOI: 10.1016/ S0140-6736(14)61058-8

- The clinical effectiveness and cost-effectiveness of telephone triage for managing same-day consultation requests in general practice: a cluster randomised controlled trial comparing general practitioner-led and nurse-led management systems with usual care (the ESTEEM trial). Health Technology Assessment. 02/2015; 19(13):1-212. DOI: 10.3310/hta19130

- Tim Holt, Emily Fletcher, Fiona Warren, Suzanne Richards, Chris Salisbury, Raff Calitri, Colin Green, Rod Taylor, David A Richards, Anna Varley, John Campbell. Workload implications of telephone triage systems in UK general practice: analysis of consultation duration during the index day in a pragmatic randomised controlled trial. *In preparation*.

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Thank you for listening

What is an email consultation?

- Two-way clinical communication.

- Via software designed to facilitate messaging.

- Or via standard email accounts.

- GP or patient initiated.

Policy situation

- Encouraged by policymakers - Prime Ministers Challenge Fund.

- Linked to the issue of access.

- Assumptions made about the potential that do not draw on evidence.

Current evidence

- Evidence base is growing.

- Good trial evidence lacking in primary care.

- Still a massive gap when it comes to research into the things UK GPs want to know about; impact on workload, safety issues and equity.

Current evidence

- Several studies conclude that the main barrier once a GP decides to use email is the lack of regulation and protocol.

- Also differences in expectations between GPs and patients, due to lack of clarification as to what email consultation is best used for.

Who is doing it?

- Nationally approx. 25% of GPs report say they have done an email consultation.

- Recent survey in Oxfordshire indicated that levels might be higher in this area.

Scoping survey

- Sent 573 surveys across the 81 practices in Oxford CCG.

- 193 responses (34%) from 69 practices (88% represented).

AltCon study

'The potential of alternatives to face to face consultation in general practice, and the impact on different patient groups'

Support for GPs

- Is lacking…with lots of contradiction.

- No clear rationale for this given email is such a mainstream technology used in several sectors.

Support for GPs

- Medical Protection Society in 2014:

'*Only appropriate matters should be dealt with via email exchanges, eg, appointment scheduling, ordering repeat prescriptions and obtaining test results.*'

Support for GPs

- BMA

Developing General Practice today: Providing healthcare solutions for the future. 2013 describes the following as an enabler of access:

'Offering more alternatives to a face-to-face consultation when clinically appropriate, such as dedicated telephone and/or Skype-like surgeries.'

Support for GPs

- BMA survey results

'Seven in ten (71%) are concerned that using email consultations would increase their workload, and almost two-thirds (63%) are worried about using email consultations due to concerns about clinical limitations.'

Support for GPs

• BMA survey results

'Only a small minority react positively to email consultations: 6 per cent of all GPs say their experience of using email consultations has already been largely positive, and 5 per cent say their practice is considering offering email consultations in the near future.'

Support for GPs

BMA — Future of General Practice survey 2015 — ICMUnlimited...

Figure 3.8.2

Statement	%
I am concerned that using email consultations would increase my workload	71%
I am concerned about using e-mail consultations due to concerns about clinical limitations	63%
I would not use e-mail consultations due to security and confidentiality concerns	37%
I would not use e-mail consultations due to concerns about discriminating against people who are unable/ unable to use e-mail	24%
My practice has rejected the idea of offering e-mail consultations	23%
My experience of using e-mail consultations with patients has been largely negative	10%
Technology limitations in my area do not make e-mail consultations practicable	8%
My experience of using e-mail consultations with patients has been largely positive	6%
My practice is considering offering e-mail consultations in the near future	5%
No opinion	4%

Q36. Which of the following statements reflects your views on adopting e-mail consultations with patients?
Base: All participants giving valid responses (n=15,579), N/A (n=150)

Support for GPs

- RCGP

Patient Online: The Road Map. 2013

'In view of the separate and unique challenges presented by e-consultation this will not be considered in this document'
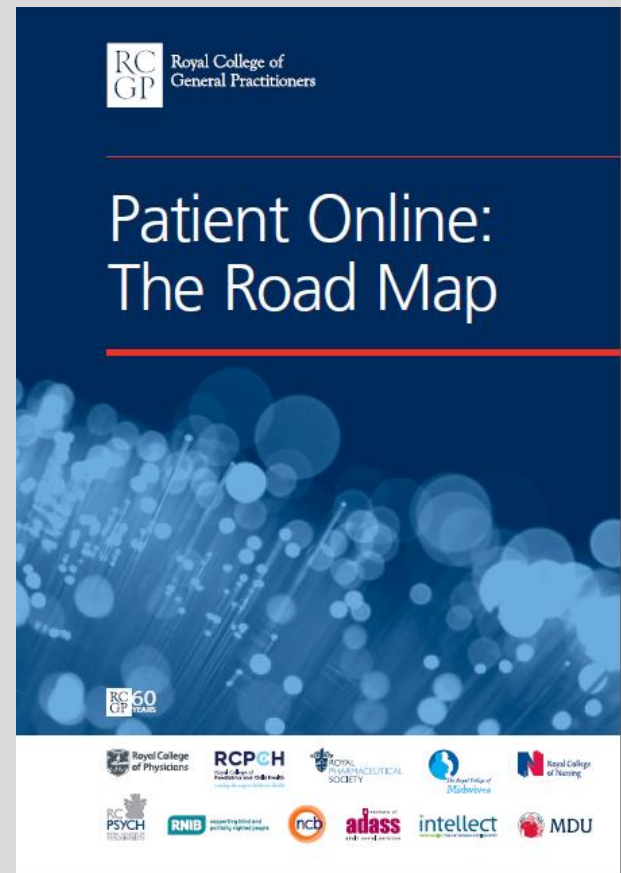
Denmark and email consultation

- Mandatory to offer email consultation since 2009.

- Approx. 11% of consultations conducted this way.

- GPs reimbursed £2-3 per consult.

- They do not have any guidance/rules of engagement either…

What next?

- GPs are going to have to take ownership of this use.

- We are working on producing practical advice (AltCon study).

- In the meantime be confident in applying your clinical experience in deciding how <u>you</u> want to use this.

Help us?

If you are using this type of communication and want to be part of our existing studies, or have thoughts on where we need to focus our research, then please get in touch.

helen.atherton@phc.ox.ac.uk

The policy context

Speech made 2 years
BEFORE research began…

"We have great things happening here in the UK….like Newham University Hospital that has reduced missed appointments by 11% through use of Skype for diabetic outpatient appointments"

Rt Hon Jeremy Hunt MP, March 2013

Research questions

1. What defines 'quality' in virtual consultations and what are the barriers to achieving this?

2. How is a successful virtual consultation achieved in an organization whose processes and systems are mostly orientated to more traditional consultations?

3. What is the national-level context for the introduction of virtual consultations in NHS organizations and what measures might incentivize and make these easier?

Early work at Newham

DAWN study (feasibility) 2011-12
  Health Foundation
  Proof of concept: can we make it work?

DREAMS study (service development) 2012-14
  Health Foundation
  Focus on organisational systems / processes

NHS funded clinical service
  This is now happening in diabetes care!

Study design

In-depth qualitative study based in two contrasting departments: Diabetes and cancer surgery

MICRO: Interactional dynamics via Skype by generating a multi-modal dataset (audio, video and computer screen capture).

MESO: Map the administrative and clinical processes that will need to change to embed online consultations

MACRO: National policymaker and other key stakeholder perspectives

Interpersonal interaction (micro)

Up to 45 ethnographic cases *(20-30 = diabetes patients, 10-15 = cancer patients).* Small numbers => ⇧ depth of analysis.

- **Analysis of Skype consultations:**
Video, audio and screen capture at both 'ends' of a remote consultation

Analysis of what is said and done, and how the technology shapes and constrains the consultation (using CA)

- **Case narratives:**
Home visit interviews to explore how the technology affects experience of illness and interaction with service

Socio-technical microsystem (meso)

Map the people and steps to implement and use Skype

Identify how the organisational roles, processes and routines change over time to accommodate and support the service

- **Ethnography**
Observations and 'naturalistic interviews' with Trust staff within using or supporting Skype. Explore significant events.

- **Workshops**
Bring together key staff to gather feedback and identify opportunity for improvement

- **Action research**
Do stuff to help get the service set up (e.g. produce SOPs)

National-level context (macro)

Interviews with national stakeholders

Documents recommended or supplied by them

=> The 'organising vision' for remote consulting

These data will be used to contextualise statements, actions and interpretations made by organisational actors

Preliminary impression: There is no formal UK policy on remote consulting (but much talk…)

Next 3-6 months

Months 3-6: June – August 2015		
Recruit 15-20 patients	Recruit up to 20 patients across case sites (15 diabetes, 5 cancer)	Aug 2015
Collect data for up to 10 consultations	Collect screen-capture data for 5-10 consultations and pilot method for syncing audio/video data	Aug 2015
Map people and processes at case sites	Map key people and steps involved in running Skype at an organisational level	Jul 2015
First consolidating learning workshop	Gathering feedback from all those involved in, or impacted by, Skype appointments.	Aug 2015

Intended outputs

Standard operating procedures for remote consulting (already working with NHS England on these)

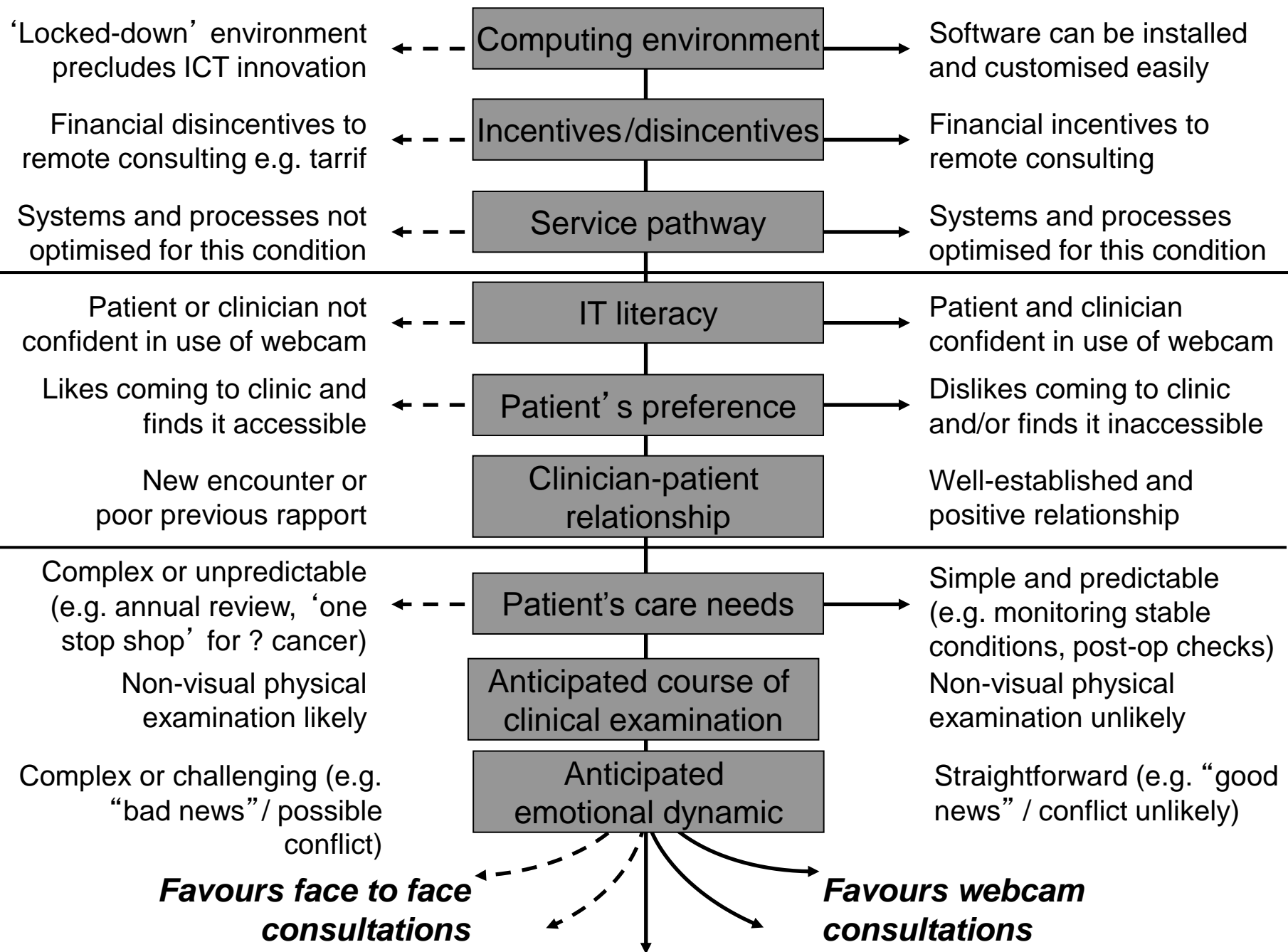Detailed description of 'what good looks like' in remote consulting => inform training and quality work

Guidance on what works for whom and 'red flag' issues

Ideas for further research e.g. in GP land

Preliminary findings

Based on pilot data

For discussion!!

	Computing environment	
'Locked-down' environment precludes ICT innovation ←		→ Software can be installed and customised easily
Financial disincentives to remote consulting e.g. tarrif ←	Incentives/disincentives	→ Financial incentives to remote consulting
Systems and processes not optimised for this condition ←	Service pathway	→ Systems and processes optimised for this condition
Patient or clinician not confident in use of webcam ←	IT literacy	→ Patient and clinician confident in use of webcam
Likes coming to clinic and finds it accessible ←	Patient's preference	→ Dislikes coming to clinic and/or finds it inaccessible
New encounter or poor previous rapport	Clinician-patient relationship	Well-established and positive relationship
Complex or unpredictable (e.g. annual review, 'one stop shop' for ? cancer) ←	Patient's care needs	→ Simple and predictable (e.g. monitoring stable conditions, post-op checks)
Non-visual physical examination likely	Anticipated course of clinical examination	Non-visual physical examination unlikely
Complex or challenging (e.g. "bad news" / possible conflict)	Anticipated emotional dynamic	Straightforward (e.g. "good news" / conflict unlikely)

Favours face to face consultations

Favours webcam consultations

Thanks for your attention!

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