

Innovating for Improvement

Delivering remote clinical assessment in care homes (See What I See)

NHS Eastbourne, Hailsham & Seaford CCG



About the project

Project title:

Delivering remote clinical assessment in care homes (See What I See)

Lead organisation:

NHS Eastbourne, Hailsham & Seaford CCG (part of East Sussex Better Together (ESBT) Alliance¹)

Partner organisation(s):

Kent Surrey Sussex Academic Health Science Network

Project lead(s):

Fiona Streeter

Gill Potts

Contents

About the project	2
Part 1: Abstract.....	4
Part 2: Progress and outcomes	5
Part 3: Cost impact	11
Part 4: Learning from your project	13
Part 5: Sustainability and spread	15

¹ East Sussex Better Together Alliance is a partnership of 5 key NHS and care organisations working together to integrate services across health and care and enable local people to be as healthy as they can be and improving health outcomes for the local population. The partners are: Eastbourne, Hailsham and Seaford CCG, Hastings and Rother CCG, East Sussex Healthcare NHS Trust, East Sussex County Council and Sussex Partnership NHS Foundation Trust

Appendix 1: Resources and appendices.....	16
Appendix 3: Data sources for evaluation	17
Appendix 4: Reasons for call	18
Appendix 5: Sources for economic evaluation	19

Part 1: Abstract

The See What I See (“SWIS”) project piloted the use of head mounted technology (Xpert Eye) to conduct remote clinical assessments in a care home environment which would otherwise require a GP to attend in person. The GP assess the patient, remotely via the care home nurse communicating in real time with each other.

There is often a time lag between the exacerbation of a patient’s condition and the availability of a GP to undertake clinical assessment and future treatment plan. This can lead to avoidable unplanned hospital admissions which can be confusing and unsettling for patients who are often frail and potentially lead to a deterioration in their condition.

By undertaking remote clinical assessments it is hoped to reduce unplanned admissions, reduce the current wait time for a GP visit, improve the quality of care and experience for the care home resident and increase staff confidence levels and assessment skills for nurses in the care home setting.

The CCG’s area of Eastbourne, Hailsham and Seaford is known for its high level of older people and those residing in a care home. By 2019 in Eastbourne there is an expected rise of 6.7% or 800 people aged 65 years and over.

The project was implemented in two GP practices and two care homes in Eastbourne. Six clinical assessments were undertaken during project.

The idea of using some form of camera system to provide remote clinicians with real time information is not new. For example, the Airedale service uses a combination of video technology with tele-monitoring devices and a nursing call centre. Unlike other technologies Xpert Eye enables the remote viewer to share the user’s vision instead of a fixed image offering the user freedom of action by keeping their hands free. In addition, the discrete nature of the glasses means that the patient experiences a lesser barrier than might be the case with other similar technological solutions.

Part 2: Progress and outcomes

By undertaking remote clinical assessments it is hoped to reduce unplanned admissions, reduce the current wait time for a GP visit, improve the quality of care and experience for the care home resident and increase staff confidence levels and assessment skills for nurses in the care home setting.

Evaluation methodology

The evaluation was conducted by Kent Surrey Sussex Academic Health Science Network (“KSS AHSN”). A mixed method approach was originally designed encompassing quantitative and qualitative elements. Sources of data are summarised in Appendix 3.

Ultimately, quantitative analysis was restricted by low use of the technology. Data collection from care homes was challenging due to busy staff workloads. Data collection processes and format were simplified during the course of the project to reduce time burden. The focus of the evaluation was also shifted from statistically assessing the aptitude of Xpert Eye in the provision of responsive and timely care, to collecting qualitative feedback to explore why uptake was low.

Understanding patient experience was a central part of the evaluation framework. A patient leader² attended one care home to discuss the project with residents. As residents typically had some level of cognitive impairment, conversations were limited. Capturing the patient view is recognised as a challenge to evaluating a project of this nature.

Impact

In the live period of the project (July 2017 – April 2018), a total of 26 patients were asked if they were happy to participate and all agreed. Six remote consultations were carried out as summarised in figure 2. (For comparison, appendix 3 gives details of calls made by the home to GP from general call log).

² Supporting the programme as a participant in KSS AHSN’s “Patients as Partners For Improvement” Programme



One remote consultation involved a medication review, which would have otherwise been resolved over a phone call.

One patient had a possible leg infection, and without Xpert Eye would have required a GP visit.



One patient had a rash, which was examined using multiple features of Xpert Eye such as picture annotation. This saved a GP visit to the home.

Three patients were seen via Xpert Eye in a “ward round” format. This allowed minor issues to be dealt with proactively.



Figure 2: Breakdown of remote consultations by reason for consultation³

³ Acknowledgements for images, all sourced from the Noun Project: Rash by Blair Adams, Group by Jack Curry, Leg by Brian Gonzalez, Pills by dDara

Results of staff survey

A questionnaire was used following Xpert Eye training sessions for GPs and care home staff. In total 33 responses were collected; it is noted that the statistical power of this sample size is limited. Levels of positivity, as shown in figure 4, differed between the two settings, the care home setting giving more positive responses across the majority of measures.

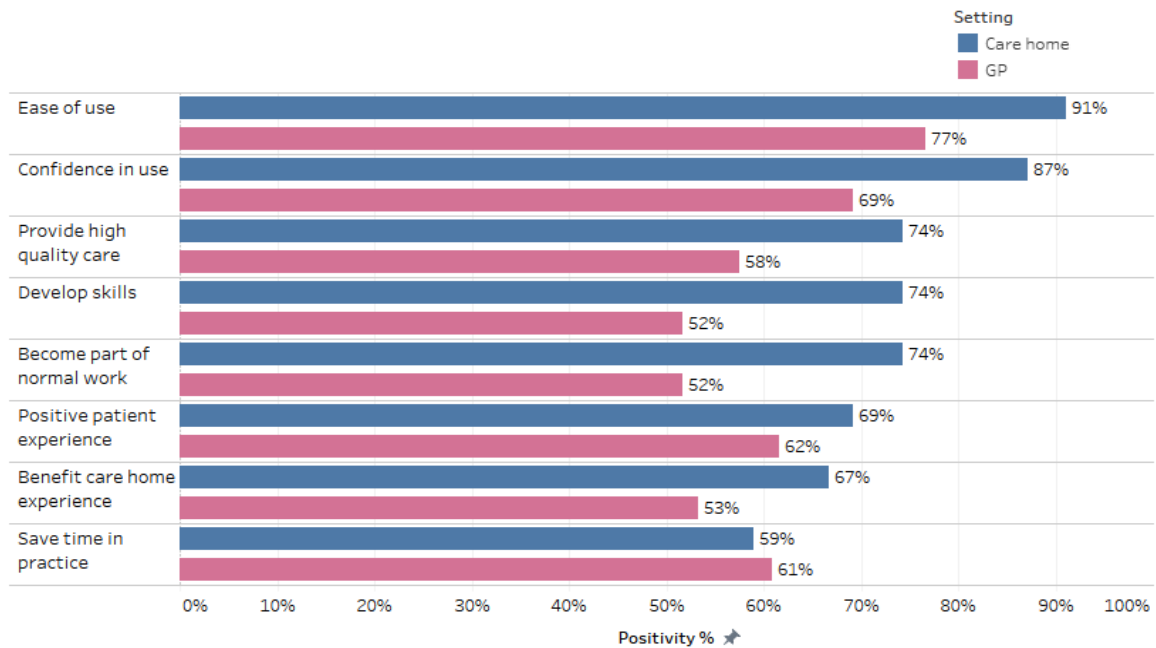


Figure 4: The level of positivity indicated in post-training feedback forms by care home staff (n=13) and medical professionals within the GP practices (n=20)

- Staff from both settings indicated the technology was easy to use and that they felt confident about using it.
- Care home staff indicated considerably higher than GPs their positivity to the notion that the Xpert Eye would facilitate skills development. This was also the case on considering whether Xpert Eye becoming a part of normal work.
- GPs were marginally more positive when considering the time saving potential of the technology.

Qualitative feedback

Qualitative feedback forms a central part of the evaluation, not only in informing the anticipated outcomes of the intervention but to explore why uptake of the technology was low. Several themes were identified in the various forms of feedback as described below.

Time saving

- Mixed comments were received on whether the technology would save time.

- GP1: *"It enabled me to save time on travelling and it was great to be greeted with a huge smile from one of the patients who clearly enjoyed the experience!"*
- GP2: *"If they were 20 minutes' drive away it would be useful for some things, but we deliberately don't look after Nursing Homes that are not close by".*
- Feedback from a GP following 3 remote consultations indicates that there would have otherwise been a response within 4 hours to assess the patient.
- One care home commented that waiting for the GP to type notes was a disadvantage. Contrastingly, for the GP, the ability to type up notes during the consultation was a positive, time saving feature.

Technology performance

- Poor connectivity was reported as an issue on all six of the calls, largely attributed to poor internet connection at the care home.
- Nurse1: *"The connection was not very stable in the patient's room and it had to therefore be done in the office which was ok for him but wouldn't not have been if he had been bedbound."*
- GP2: *"The picture was poor and would not have been good enough to identify, for example, a skin rash. Obviously, it is not a substitute for seeing the patient if I need to examine their chest etc."*
- Other issues included the kit being bulky to carry around and sound issues. One patient could not hear. However, another comment stated that the resident was able to see the GP, hear what was said and answer the doctor's questions.
- It was widely accepted that a period of learning and adjustment is required when using new technology, it was expected use would be easier with time and that issues such as poor connectivity are rectifiable.

Patient experience

- Patient feedback was positive, however, important to note is potential social desirability bias arising from patients or staff not wanting to offend or feeling invested in the intervention.
- Twice care home staff commented that the consultations happened at a scheduled time, suiting the patients compared to the risk of the GP arriving at an inappropriate time (for example, during a meal time).
- Nurse1: *"Patient was comfortable in own room. Did consultation at a convenient time for resident"*.
- A reflection from the care home ward round session was surprise that all patients were on board, instantly comfortable with the technology and greeting the doctor on the screen.
- Whilst discussing directly with the patients was difficult, the two patients who did give feedback spoke positively about Xpert Eye.
- One patient experience form was completed, all questions scored positively.

Working environment

- Stakeholders saw that there was a future for this kind of technology in their day to day practice.
- *Nurse2: “Using the kit was a new experience for me and new learning opportunity”.*
- *GP1: “It’s a first step, there are so many wonderful ways in which we could use this.*

Summary

Table 2 summarises findings against original project aims. In conclusion a lack of robust quantitative data due to low numbers of calls means there is little evidence of impact. None the less the qualitative feedback offers valuable insight both into the operability of the intervention and to barriers to implementation of innovative technology in the NHS.

Objectives	Themes and/or commentary	Conclusion
Reduce unplanned admissions to an acute setting	Mechanism for achieving reduced objective has been reiterated	Insufficient consultations to evaluate this objective
Shorter waits for clinical assessments for patient	GPs are linked with close local care homes in urban areas	Evidence suggests not time saving for pilot setting but could be in more rural area requiring more GP travel or in circumstances where there are barriers for patients registering with a GP (e.g. homelessness)
Improve quality of assessment	Technology performance issues Cannot always replace a GP visit but more interactive experience than phone advise Low positivity towards Xpert Eye becoming a normal part of GP's work Ward round model introduced during course of project – more proactive care model	Indications that there is potential for Xpert Eye to improve assessment if used in the right context. Feedback from patients and nursing staff suggests that a good quality of care can be delivered with Xpert Eye, particularly with patient involvement
Improve capacity for primary care clinicians	Potential to be used with the GPs and other settings Issues with technology can waste GP time Time saving minimal if care home located close to GP surgery	Feedback around time saved for the GP setting is mixed. Other settings are being examined for use of Xpert Eye
Increase level of staff confidence and assessment skills	Care home staff higher positivity towards Xpert Eye developing skills than GPs Feedback referring to learning new skill from care home staff	Potential for care home staff, but not seen as a benefit for GPs
Enhance patient experience	Positive patient experiences reported All patients asked for and gave consent Patient felt involved in the consultation, could ask questions and could discuss concerns	Evidence is entirely positive (limitations to data have been discussed)

Table 2: Summary of findings against objectives

Part 3: Cost impact

The health and care services as part of this innovation project are commissioned in a combination of ways as they involve services provided by General Practitioners and by Care Homes. The CCG co-commission our GP practice services, who within this operate as independent contractors. The Care Home sector is commissioned by the local authority (East Sussex County Council). Unlike NHS services these services are means-tested, so many patients will fund that care themselves. Both sectors receive budgets from central government to pay for these services.

Financial evaluation

A cost-benefit assessment has been carried out by KSS AHSN, in line with HM Treasury 'The Green Book: appraisal and evaluation in central government'. Costs are those incurred from training, equipment use and implementation. Anticipated benefits are aligned with the project objectives, their assessment is outlined below. Sources for financial values associated with benefits are included in appendix 5.

Anticipated benefits

- Reduce unplanned admissions to acute setting from care homes – the average cost for an unplanned admission is £1,590. There is currently no evidence on the probability of admissions.
- Shorter waits for clinical assessment for patient – this outcome is considered a mechanism for reducing unplanned admissions and improved patient experience and is not ascribed a financial benefit. Although it is widely recognised that admission of frail elderly people to hospital can compound already complex conditions and can be distressing for the patient.
- Improve quality of assessment - in a study of the quality of care provided to patients via telephone consultations compared to face-to-face consultation, patients who had received a call from their GP or nurse were found to make significantly more contacts with health professionals at the surgery over the following 28 days. Were telephone consultations to be replaced with Xpert Eye consultations, there is potential to reduce the number of subsequent contacts. One call led to telephone advice being replaced. Based on the call logs it is estimated this saving could be relevant to 50% of calls.
- Improve capacity for primary care clinicians – a GP contact cost is estimated at £100, including a consideration for travel time and expenses. This compares to £24 for a telephone consultation, which will be taken as the value for conducting an Xpert Eye consultation, producing a difference of £76. Two calls led to a visit being avoided. Based on the call logs it is estimated this saving could be relevant to 10% of calls.
- Increase level of staff confidence / assessment skills - it has been suggested that the use of Xpert Eye will enhance confidence and assessment skills of care home staff therefore providing a mechanism of reducing contacts with the

GP, as well as supporting care home staff in their own development which the project team believes and could contribute to staff retention in an area where that is much needed.

- Enhance patient experience – although considered paramount in delivering an intervention successfully, the relationship between patient experience and financial return is difficult to quantify and is not considered here.

Economic outcome

Model	Modelled savings
Actual evidenced benefits realised during project period	£250
What could have happened if the technology has been used in appropriate scenarios (as taken from the call logs)	£9.5k

Modelling the “what could have happened” scenario (with adjusted costs) yields a return on investment of 14p for every pound spent. On the scale of 12 visits saved and 59 improved phone advice events per month are required to breakeven. The potential savings from reducing unplanned admissions are significant; it is concluded that to make a robust economic assessment, further work is required to understand the potential admissions avoidance.

Part 4: Learning from your project

At the start of the project our ambition was to test the technology with one care home, one GP practice and our Out of Hours service provider. We partially exceeded this expectation as we successfully recruited two care homes and two GP practices in Eastbourne. However, engagement with the Out of Hours service provider proved challenging and they did not participate in the pilot.

Enablers

- A key factor to the success of the project was the commitment and engagement from members of the project team which enabled us to overcome some initial barriers and challenges around the use of the technology. All partners placed a high value on the benefits of working together and building relationships across individuals and organisations.
- One of the care homes identified a nurse champion from within the home. Her passion and enthusiasm to use the technology helped gain buy-in from other members of the nursing team.
- A key driver for this project is the fact that the CCG's area is known for its high level of older people and those living in care home settings. By 2019, in Eastbourne alone this number will rise by 6.7%.

Challenges

- Receiving regular base line data from the care homes proved challenging we overcame this by strengthening engagement with the care homes and simplifying the process.
- Buy-in and engagement from a range of individual partners was essential to test out the technology, relationship management became a highly challenging element of the project – for the project to be successful we needed engaged GP practices to be linked to engaged care homes. This proved more complex than initially expected. Although we had an enthusiastic GP clinical lead for the project they had a number of competing CCG priorities which impacted on the amount of support they were able to provide especially in terms of peer support to GP colleagues.
- Short scale funding projects can mean it is challenging to engage participants due to concerns around a lack of sustainability. We have recognised that you need to work with and capture the “innovators” in the early stages who are willing to participate.
- The introduction of a new CCG policy to move all new care home residents to a single practice was both an enabler (those receiving new patients would be keener to be involved) and a barrier (if you weren't a named practice why would you want to get involved).

We have learned much from this project as a CCG, including the following four key learning points:

- Having a strong clinical lead is critical to the uptake and implementation of a new innovation, especially given the pressure on local services.
- It is crucial to understand and conduct impact assessments (Equalities, Privacy etc.), particularly around Information Governance at an early stage of project development and to put the relevant actions in place.
- Good project management (including data) is really important to bring together a project of this nature, particularly when the innovation involves a number of partners.
- The involvement of a patient leader in our work, brought a real richness to our conversations and assessment of our success.

The following would have been useful to know at the start of the project:

- The frequent changes in staffing both at the Care Homes and GP practices involved had an adverse impact on the success of the project, so in retrospect we may have chosen a more stable set of services to test this within.
- Enthusiasm of clinical staff does not equate to a commitment to take part in the project.

The key things that others would need to know if undertaking a similar project are:

- Undertake your privacy impact assessment at the beginning of the project, seeking advice from your Information Governance lead and put in place any associated contractual requirements that incorporate the necessary privacy impact assessment agreements as early as you can.
- Clearly translate enthusiastic colleagues into actively engaged project members.
- Ensure that patient consent issues are agreed right at the beginning of the project.
- Include a patient leader on your project board from the start.

Part 5: Sustainability and spread

We would like to continue testing the innovation in this and other settings to generate a wider number of assessments and are currently prioritising which of our ideas would best support us in our current challenges as a CCG.

We are working with our local Clinical Leadership Forum and are presenting the technology to our major local provider's Improvement Forum to understand other opportunities and agree which areas to continue testing this in. We continue to work with KSS AHSN to identify opportunities beyond our CCG area.

We have presented the project at a Kent Surrey Sussex Living Well for Longer Collaborative. An article on the project was published in the CCG's annual report (see appendix 1).

As a commissioning organisation, we believe the project is replicable within our organisational context, across a greater range of settings. There could be different partners involved in the provision but the core principles would remain the same.

The upcoming milestones/activities beyond the funding are:

- Presentation at the East Sussex Healthcare NHS Trust Improvement Forum in June 2018.
- Discussion at the East Sussex Better Together Alliance Clinical (ESBT) Leadership Forum in summer 2018.
- Exploring if the innovation can support our inclusion work to support clinical assessments for our homeless population (part of our 2018 Inclusion Action Plan).

Appendix 1: Resources and appendices

Please attach any leaflets, posters, presentations, media coverage, blogs etc. you feel would be beneficial to share with others.

Note that, as we would want to upload these onto the Health Foundation website, we ask that you are discerning with additional material provided.

Presentation to KSS AHSN Care Home Collaborative Event



See What I See
Presentation to KSS A

See What I See Flyer April 2018



Remote_Clinical
Assessment flyer Apri

Article from NHS Hastings, Rother & Seaford CCG Annual Business Plan 2017



see what i see east
sussex ann rev 2018 (

SWIS Newsletters



SWIS Feb'18
newsletter.pdf

SWIS video

<https://www.youtube.com/watch?v=9AYR0I7oQCI>

Appendix 3: Data sources for evaluation

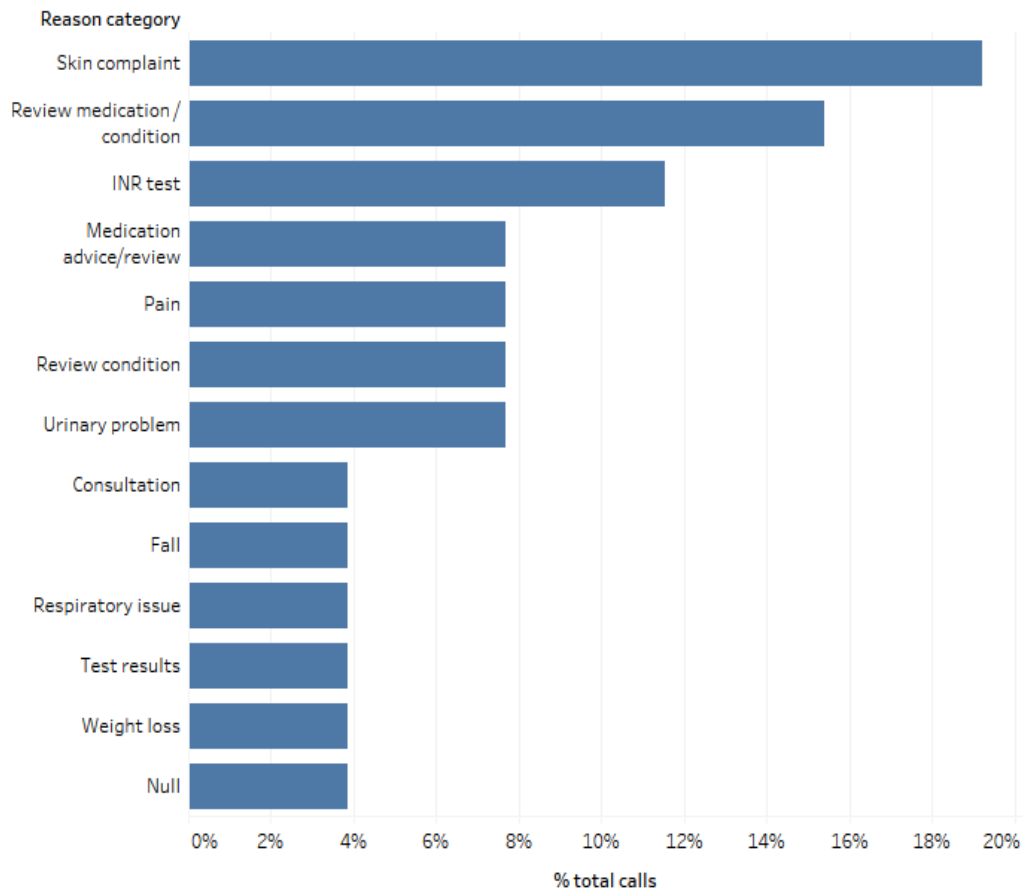
Objectives have been set out as:

- a. Reduced unplanned admissions to an acute setting
- b. Shorter waits for clinical assessments for patient
- c. Improve quality of assessment
- d. Improved capacity for primary care clinicians
- e. Increased level of staff confidence and assessment skills
- f. Enhanced patient experience

Data source	Mechanism	Objective
Care home call log	Completed by care homes and submitted weekly. As well as capturing time from call to GP contact, call logs were key information source for reasons not to use the technology and for understanding scenarios deemed suitable for use of the technology	b
GP consultation feedback	Completed by GP after every remote consultation via Survey Monkey link on PC desktop, questions included what features of the technology were used and what the GP thought would have happened if it had not been used	a-d
Staff training questionnaires	Questions around enabling quality care, efficient care and skills development. Completed at the point of training	b-f
Regular staff contacts	Key points will be asked during ad hoc communication with staff as well as at key times such as exit from the project	a-f
Staff reflection forms	Staff were provided with forms to capture ad hoc reflection – largely asking for free-text input but with some structure around reflection themes	a-f
Patient experience questionnaire	Questions around the patient feeling informed, involved and at ease. Paper form filled in with help of care home staff	f
Care home patient interviews	With support of patient leader – care home visit was made to discuss the project with patients	f
On going clinical input	From GP supporting project to discuss clinical perspective	a-f

Appendix 4: Reasons for call

Frequent reasons for calls as per figure below (based on limited data collected June 2017 – February 2018). The most common call reasons were skin conditions and review of medication and patient condition within the same call.



Percentage of calls logged by one care home by reason for call

Appendix 5: Sources for economic evaluation

NEL admission costs (£1590):

National Schedule of Reference Costs - NHS trusts and NHS foundation trusts. Weighted average of all non-elective inpatient (long stay) and non-elective inpatient (short stay) data

This cost has been calculated from the NHS Reference Costs 2013-14, and represents the average cost per 'finished consultant episode' (FCE) - an FCE (or hospital episode) is a period of admitted patient care under a single consultant, within a single healthcare provider. It has been derived from averaging all the data for non-elective (long stay) and non-elective (short stay) episodes. The average cost per episode for non-elective (long stay) inpatients is £2,837 per episode; for non-elective (short stay) inpatients it is £603 per episode (both costs quoted at 2013-14 prices). It has been updated by inflation to 2017 prices.

Study of the quality of care provided to patients via telephone consultations compared to face-to-face consultation:

Campbell, John L et al. 'Telephone triage for management of same-day consultation requests in general practice (the ESTEEM trial): a cluster-randomised controlled trial and cost-consequence analysis' *The Lancet*, Volume 384, Issue 9957, 1859 – 1868

GP costs (£100 for out of surgery visit):

Unit Costs of Health & Social Care 2014 (Curtis, 2014), p.195

This is the average cost for a GP out-of-surgery visit lasting an average 23.4 minutes; it includes travel time, and costs relating to direct care staff (practice nurses). The source quotes the same cost including qualification costs, at £114 per visit (2012-13 prices). Data are also quoted excluding direct care staff costs: the average cost for a 23.4 minute out-of-surgery activity visit becomes £85 (£104 including qualification costs) (both at 2012-13 prices). The costs are derived from practice salary costs, including administrative and clerical staff (and including on-costs such as national insurance and pension contributions), premises costs and business overheads, and training, travel and capital costs. All costs are clearly presented in a summary table on p.191 of the source document, with related data and commentary on pp.190 and 192. It has been updated by inflation to 2017 prices.