



Northern, Eastern and Western Devon
Clinical Commissioning Group

Item 6-NL Exec on 28.8.13

1. Northern Devon Telehealth Service Pilot Evaluation

1.1 Introduction

The purpose of this paper is to collate available commissioning intelligence in order for the Northern Locality Board of NEW Devon CCG to be able to understand the impact of the Telehealth pilot service for COPD patients in Northern Devon and for this to inform a decision by the board about future commissioning arrangements. It includes a brief review of the following:

- Strategic background, how we have got here, national drivers and local QIPP;
- National evidence;
- Local evaluation from similar services - Plymouth
- Costs and savings
- The remote monitoring DES
- The evaluation of the Northern Devon service
- Patient experience
- Health Professional feedback
- Options for the future

1.2 Limitations of this evaluation

This evaluation does not profess to be a scientific evaluation of telehealth. It is simply intended to pull together in one place a range of available information, data and feedback related to the telehealth service pilot in Northern Devon which will allow the clinical commissioning board to consider a decision regarding future commissioning of the service.

In the evaluation of the scheme it is worth indicating where there have been difficulties and shortfalls, particularly in terms of collecting meaningful data and having these processes in place at the start of the scheme and set up to run for the duration.

The challenge in judging if the scheme has been a success depends in part, from the perspective of cost effectiveness, on the assessment of the number of admissions saved at

Northern Devon Healthcare Trust (NDHT) compared with the on-going cost of the service which is currently contracted to Peninsula Community Health. It is a relatively expensive service costing £8k to £11k per month, but indications from the start of the scheme, expressed by Dr Paul Lovell, were that if 64 admissions annually were saved by the scheme then it would pay for itself.

Monitoring these saved admissions is difficult and without a well-researched baseline and constant evaluation on the ground, it is unlikely that evidence presented within this paper and indeed elsewhere will give us a definitive answer. In addition, it is difficult in a complex healthcare system to draw direct links between initiatives and outcomes, particularly when there may be a number of initiatives in the health and social care health community focussed for example, on urgent admission prevention.

It is also worth noting, that the pilot service has been run across a period of time of great change in the Northern Locality commissioning and provider environment. Teams that were responsible for the original commissioning of the service have been reorganised and key individuals who acted as driving forces behind the project are absent. Their energy, commitment and clinical expertise has been missed and could have helped to mould and focus the service toward the end of the contract period more effectively.

2. Background

*'Budgetary pressures mean that health services around the world are actively exploring ways to deliver care that helps to prevent ill health and is cost-effective. There is a particular focus on management for people with long-term health conditions and the desire of people to receive care in their own homes. One intervention is 'telehealth', which involves the remote exchange of electronic information between patients and health care professionals. For example, blood glucose or haemoglobin oxygenation measurements might be taken by the patient in their own home most days of the week and the results transmitted to health care professionals over a telephone line. Professionals then use protocols to respond to worsening trends in measurements, for example by providing advice and, where appropriate, intervention.*The original service roll out in the Northern Locality of the old NHS Devon, was described in a press release as the following –

An Innovative support service for people with Chronic Obstructive Pulmonary Disease in North Devon has demonstrated its first successes

Local GPs, NHS Devon and the Northern Devon Healthcare NHS Trust launched Telehealth, a remote support service, for patients with Chronic Obstructive Pulmonary Disease (COPD) in North Devon.

Telehealth is used across the NHS to monitor and manage people's conditions remotely, and it enables the community respiratory nursing teams to provide treatment and care to patients at home. Patients with a long-term condition take their daily health readings, such as oxygen levels, and transmit them to a clinician.

NHS Devon has commissioned Telehealth, an NHS-run clinical service based in Cornwall, to provide this service across North Devon giving hundreds of respiratory patients the added reassurance and proactive care that they need.

Trials undertaken in other parts of the country show that if used correctly Telehealth can deliver huge benefits for patients. The programme was firstly launched in Holsworthy and Torrington, and in rolled out in phases to other COPD patients across Northern Devon.

Telehealth as an innovation, was brought about by the 3millionlives programme, a Department of Health belief that if implemented as part of a whole system redesign of care,

'telehealth and telecare can alleviate pressure on long term NHS costs and improve people's quality of life through better self-care in the home setting. - See more at:

<http://3millionlives.co.uk/about-3ml#background>

'Advocates claim that the use of telehealth devices can help to prompt earlier and more coordinated care from professionals or improve the ongoing self management by the patient. Thus, it is argued, telehealth has the potential to prevent unnecessary hospital admissions and deliver efficiency savings for the NHS.'

Telehealth in the Northern Locality of the NEW Devon CCG was introduced as a concept by Dr. Paul Lovell and badged under their own Whole Systems Demonstrator (WSD). The concept fitted naturally with two of the drivers for health, QIPP (Quality, Innovation, Prevention and Productivity) and care closer to home. QIPP, because the service indicated that there would be a possible reduction in emergency admissions for those people monitored by the telehealth service and care closer to home for obvious reasons, in that a patient can be monitored without leaving their home and receive advice and information via the telephone.

3. NEW Devon CCG strategic background

NEW Devon CCG's Integrated Commissioning Plan 2013-15 sets out its core strategies and states telehealth as a key initiative within its plan for long term condition care.

3.1 Core strategy 3

Commission to prevent ill health, promote wellbeing and help people with long term conditions to live well

3.2 Strategic ambition for long term conditions

To develop a LTC strategy which encompasses a preventative, anticipatory and whole person approach to self care and care management, including carer support"

3.3 Key initiative for long term conditions

Support self care and self management through promoting the use of telehealth, assistive technology and web based personalised care planning for LTC and extending the range of self care and carer support solutions

4. Remote Monitoring DES

In 2013 the NHS Commissioning Board published a scheme DES, titled Remote Care Monitoring (preparation). The purpose of the DES is for GP practices to undertake preparatory work to support the subsequent introduction of remote care monitoring arrangements for patients with long term but relatively stable conditions.

NHS England will develop standard protocols and procedures that can be used across a number of long term conditions for the local priorities agreed under this enhanced service.

With regard to the future of any telehealth service it may be important to consider that it may form the 'backbone' of one of the main areas that NHS England wish to focus on in the coming years and the possibility that it may be in the best interest of our practices and patients to continue with current arrangements.

5. North Devon telehealth service description

Early in 2012, the Northern Locality contracted with Peninsula Community Health to provide 22 practices with equipment to distribute to suitable patients on their COPD register. There were 150 available slots for these patients, filled and monitored by the local CREADO Team, working in conjunction with the practices.

Currently, there are 101 active individuals with COPD using telehealth. As the pilot has been drawing to a close and with key clinical staff absent, further recruitment of service users has not been actively promoted for the previous 3 months.

For a description of the commissioned service please see the service specification which forms part of the provider contract, contained within the appendices. Patient information about the service is also included.

6. National evaluation of telehealth

6. 1 Admission prevention and mortality

In June 2012 the Nuffield trust published a document 'The impact of telehealth on use of hospital care and mortality, the full document can be found at:

http://www.nuffieldtrust.org.uk/sites/files/nuffield/publication/120622_impact_of_telehealth_on_use_of_hospital_care_and_mortality.pdf

Their findings were based on 3,000 patients taking part in a telehealth trial, the main findings being,

- *Over the 12 months that they spent in the trial, patients allocated to receive the telehealth intervention had fewer emergency hospital admissions; they experienced an average of 0.54 emergency admissions per person, compared with 0.68 per person for control patients – a difference of around 20 per cent.*
- *Over the twelve months, 4.6 per cent of intervention patients died, compared with 8.3 per cent of controls.*

- *These differences in emergency admissions and mortality were statistically significant, so were unlikely to have been caused by chance.*

• *For intervention patients, the overall costs of hospital care (including emergency admissions, elective admissions and outpatient attendances) were £188 per patient less than those for controls. However, this cost difference was not statistically significant.*

6. 2 Cost Effectiveness

The Department of Health sponsored telehealth whole system demonstrator pilot sites which included Cornwall, were nationally evaluated. A study by the London School of Economics examined the costs and cost effectiveness of telehealth in addition to standard support and treatment compared with standard support and treatment.

It looked at the QALY gain by patients using telehealth in addition to usual care and this was found to be similar to that by patients receiving usual care only, and total costs associated with the telehealth intervention were higher. Telehealth therefore does not seem to be a cost effective addition to standard support and treatment.

(Henderson et al: Cost effectiveness of telehealth for patients with long term conditions (Whole Systems Demonstrator telehealth questionnaire study): nested economic evaluation in a pragmatic, cluster randomised controlled trial: BMJ June 2013).
Available at <http://www.bmj.com/content/346/bmj.f1035>

7. Northern Devon Service evaluation

In order to evaluate the telehealth service in the Northern Devon Locality, the following factors need to be taken into consideration

- Cost – How much will the service cost and which is the funding stream that will pay for any on-going cost?
- Benefit – What is the benefit to those COPD patients that are currently receiving the service (see next section 'patient satisfaction')?
- Emergency admissions – What is the impact, if any, shown in the emergency admissions to acute services, for those patients receiving the service?
- Savings – Does the current service in the Northern Locality indicate that there any cost savings attributed to it
- Impact on Primary Care – *'Greater use of remote care monitoring for patients with long term but stable conditions agreed as part of a care planning discussion has the potential to improve people's quality of life and to reduce unnecessary appointments and the need for pre-assessment or patient administration at the GP practice, freeing up valuable GP and practice staff time'* has there been an impact on our GP practices?

Local data analysis through our own information department in the NEW Devon CCG concluded,

All North Devon COPD admissions year-on-year change (2011/12 compared with 2012/13)

Volume of admissions - down by 20%
Length of stay of admissions - down by 37%
Cost of admissions - down by 23%

Comparing COPD admissions before and after joining the scheme admissions are down by 40% in volume terms, down by 9% in beddays and down by 34% in costs. This activity is for 63 of scheme members.

However, only patients joining the scheme in March 2012 have a full 12 months data available before and after joining the scheme. For other patients the number of months data available after their join date will equal the number of months pre-scheme that are included in the analysis. For example patients joining in April 2012 have only 11 months data available post-scheme so only 11 months of admissions pre-scheme are included.

Future analysis is required to compare a full twelve months admissions pre & post-scheme for all members once this data is available.

Also, for consideration - only 63 of the active COPD telehealth scheme members have had COPD admissions since 2010/11. This may raise a question regarding the criteria for the inclusion of the remaining patients on the scheme as they had no COPD admissions in this period.

Appendix 1 shows the analysis in full. The final sheet indicates that best guess that the reduction in COPD admissions to NDHT shows a reduction in costs of £39k. This is for 11 months of the scheme which would therefore be at a direct cost of the service of £96k.

8. Evaluation of other NEW Devon locality telehealth schemes

In addition to the service in the Northern Locality, our neighbours in Plymouth have recently evaluated their own telehealth pilot service and it may be helpful to consider some of the conclusions they have drawn from this evaluation. The Plymouth service would appear to differ from the Northern Locality in its size, cost and conditions. Plymouth have made telehealth available for both heart failure and COPD patients, up to 30 patients with each condition were supported for a pilot period.

The cost of providing the service (with an alternative service provider) was similar at £75 per patient per month against approximately £77.50 per patient per month in North Devon but the provision of the service differed in that data feeds from the devices were not supported with a nurse advice line provided by the telehealth provider but seem to have been fed through to the appropriate community team.

The evaluation found that despite their patients having a chronic, and by nature, deteriorating condition, both the COPD Service and the Heart failure Service showed a saving on admissions. The average was 0.7 admissions for the COPD service at 6 months to 1 year, and 2 admissions for Heart failure at 9 and 12 months. This equates to a saving of

over £1,500 per COPD patient, and over £4,000 per Heart Failure patient, on telehealth, based on the current basic cost of hospital admissions. This does not take account of the cost for the community service in terms of telephone advice.

It may be more difficult to draw any firm conclusion from the Plymouth pilot in that it looked after fewer patients and differed in the scope of what was offered. They do point out in their evaluation that telehealth appeared to be more effective for those patients who suffered with heart failure as opposed to those suffering from COPD. This was attributed to the statement below quoted from the Plymouth evaluation

9. Costs

The telehealth scheme in the Northern Locality was initially funded and will now continue to be funded until December 2013 through section 256 monies. This has allowed for a test of change to be undertaken. The contract is due to lapse at the end of December 2013. (This has been recently extended to allow time for completion of this evaluation). The on-going costs for 150 telehealth users are:

£11,618.83 per month

£77.50 per month per patient

£139,425.96 per annum

Evaluation of the scheme has estimated gross savings of £39k through avoided admissions.

Currently only 101 patients are actively using telehealth. It is possible that total costs going forwards, could be reduced by reducing the number of units available and better focussing of these units on people who may gain the most benefit.

If there was a local agreement to continue to commission the scheme from January 2014, a funding stream would need to be identified. Any service is likely to require a tendering process. Through this process costs may also reduce as current estimates are based on prices current 18 months to 2 years ago at the commencement of the contract period. Since then telehealth technology has progressed and there is also competition between providers.

10. Service user feedback

It will be vital that locality commissioners understand the value that service users themselves put on the availability of the telehealth service.

The Patient, Advice, Liaison Service (PALS) team on behalf of the Northern locality, NEW Devon CCG have developed a survey of telehealth service users to understand patient experience of using the service. This questionnaire was developed and tested with the involvement of two existing service users. The outcome of this questionnaire in terms of collated responses will be available for the consideration of clinical commissioners by mid September. The questionnaire is attached as an appendix.

11. Health professional feedback

11.1 Community Respiratory Service

We have asked the local community respiratory service (CREADO team) for their own feedback.

The CREADO service felt that when given to the 'right' service users, it can be extremely useful.

"Telehealth have often sent us data which has triggered us to contact the patient and instigate changes to prevent further deterioration. Telehealth gives us a pair of eyes into a patient when that patient may not think to ring us for help or they don't think that their condition warrants it."

It was also observed though that it can be hard to persuade people as to the benefit and some patients have not seen the use of daily readings leading CREADO to suggest that "possibly more careful selection of whom was put forward for telehealth would make the difference"

11.2 General Practice

All GP practices in North Devon were invited to give feedback about Telehealth by email. They were asked:

"Could you please give us any feedback you have about your experience as a health professional of your patients use of telehealth for COPD? Have you observed any benefits? What do you think have been the negatives if any? Do you think that this service should be continued to be provided for selected patients with COPD? Any other feedback that you would like to give?"

Of the two practices that have responded so far, observations have included that the service is a poor use of NHS funding, there are few observed benefits and difficulty recruiting patients. Practices still have further time to respond and we will continue to collate these responses for the Locality Commissioning Board.

12. Summary of options available to commissioners

There seems to be both national and local evidence that telehealth does prevent some admissions to secondary care but there does not seem to be strong evidence of cost effectiveness either nationally or locally.

Survey information of service users and health professionals is still being sought. . Once this has been collated, The Northern Locality Commissioning Board will then have a number of options available:

1. Give notice on the entire current telehealth service and do not continue it after December 2013

2. Continue the service at the level currently commissioned (150 units) and identify funding from the locality budget. A number of sub variants are also available. Commission the following :

–machines only

–call centre and machines

-machine and call centre/telecoaching for first 3 months of usage

3. Continue funding the service for only current service users (101 units) with no further investment

-machines only

-call centre and machines

4. Continue funding a smaller service, focussing on selecting people who will gain the most benefit. It is not known how big that service would need as criteria for selection would need to be identified but assume 50-75 units.

5. Consider expanding the service to offer telehealth for other conditions

- glucometers for diabetes
- weighing scales for heart failure

13. Appendices

Appendix 1 – Local data evaluation

Analyst Sarah Lea
Contact Number 01392 267711

Date 19/06/2013

Period April 2011 - March 2013

Client Murray Heath

Description North Devon COPD admissions

Source SUS INPAT COSTED

File Name \\cyn\private_folders\murray.heath\Desktop\IND264 COPD telehealth evaluation.xlsx\summary



Northern, Eastern and Western Devon
 Clinical Commissioning Group

ACS - COPD / Asthma	ACS - Chroni	Obstructive pulmonary disease
CCG Locality	Northern Lo	Locality
Provider	(All)	

Provider_Group	Financial Yr Data		2011/12		2012/13	
	Sum of Volume	Sum of LOS	Sum of Pbr_Totals_Cost	Sum of Volume	Sum of LOS	Sum of Pbr_Totals_Cost
LOCAL PROVIDER	257	1,409	£565,469	308	1,925	£695,390
COMMUNITY PROVIDER	9	132	£0	6	207	£0
OTHER NCA	2	56	£8,768	1	3	£2,286
OTHER SLA	1	3	£2,898			
Grand Total	269	1,600	£577,135	315	2,135	£697,676

Diff - 2012/13 - 2011/12		
Sum of Volume	Sum of LOS	Sum of Pbr_Totals_Cost
51	516	£129,921
-3	75	£0
-1	-53	£6,482
-1	-3	£2,898
46	535	£120,541

% Diff - 2012/13 - 2011/12		
Sum of Volume	Sum of LOS	Sum of Pbr_Totals_Cost
19.84%	36.62%	22.98%
-33.33%	56.82%	0.00%
-50.00%	-94.64%	-73.93%
-100.00%	-100.00%	-100.00%
17.10%	33.44%	20.89%

Nikki Bray, Lead Commissioning Manager LTC and Murray Heath, Service Delivery and Design Coordinator, Northern Locality New Devon CCG: Telehealth commissioning paper August 2013

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Northern, Eastern and Western Devon
 Clinical Commissioning Group



ACS - COPD / Asthma	ACS - Chronic obs
CCG Locality	(All)
Case Type	EM - Emergency
Pseudonym	(All)
Discharge period	(All)
Month&Year	(All)

Sum of Volume	Financial Year	Financial Month	Telecare ref	2012 - 03	2012 - 04	2012 - 05	2012 - 06	2012 - 07	2012 - 08	2012 - 09	2012 - 10	2012 - 11	2012 - 12	2013 - 01	Grand Total
2010/11	April			0	0	0	0	0	0	0	0	0	0	0	0
	May			0	0	0	0	0	0	0	0	0	0	0	0
	June			0	0	0	0	0	0	0	0	0	0	0	0
	July			0	0	0	0	0	0	0	0	0	0	0	0
	August			0	0	0	0	0	0	0	0	0	0	0	0
	September			0	0	0	0	0	0	0	0	0	0	0	0
	October			0	0	0	0	0	0	0	0	0	0	0	0
	November			0	0	0	0	0	0	0	0	0	0	0	0
	December			0	0	0	0	0	0	0	0	0	0	0	0
	January			0	0	0	0	0	0	0	0	0	0	0	0
	February			0	0	0	0	0	0	0	0	0	0	0	0
	March			0	0	0	0	0	0	0	0	0	0	0	0
	2011/12	April			1	0	0	0	0	0	0	0	0	0	0
May			1	1	0	0	0	0	0	0	0	0	0	0	2
June			0	0	0	0	0	0	0	0	0	0	0	0	0
July			0	1	0	0	0	0	0	0	0	0	0	0	1
August			2	1	0	0	0	0	0	0	0	0	0	0	3
September			0	0	1	0	0	0	0	0	0	0	0	0	1
October			2	0	0	0	0	0	0	0	0	0	0	0	2
November			0	2	0	0	0	0	0	0	0	0	0	0	2
December			0	1	0	0	0	0	0	0	0	0	0	0	1
January			1	1	1	0	0	0	0	0	0	0	0	0	3
February			1	1	2	0	0	0	0	0	0	0	0	0	4
March			0	2	3	0	0	0	0	0	0	0	0	0	5
2012/13 YTD	April			0	1	2	1	0	0	0	0	0	0	0	3
May			0	0	1	1	0	0	0	0	0	0	0	0	2
June			0	1	1	0	0	0	0	0	0	0	0	0	2
July			0	0	0	0	0	0	0	0	0	0	0	0	0
August			0	0	0	0	0	0	0	0	0	0	0	0	0
September			0	0	1	0	0	0	0	0	0	0	0	0	1
October			0	0	0	0	0	0	0	0	0	0	0	0	0
November			0	1	1	0	0	0	0	0	0	0	0	0	2
December			0	0	0	0	0	0	0	0	0	0	0	0	0
January			0	1	0	0	0	0	0	0	0	0	0	0	1
February			1	3	0	0	0	0	0	0	0	0	0	0	4
March			0	2	2	0	0	0	0	0	0	0	0	0	4
Grand Total				11	20	22	13	9	22	17	18	10	2	2	146

Pre	9	9	12	7	4	6	0	5	4	0	0	0	0	1	57
Post	2	9	6	3	1	3	6	6	2	1	1	1	1	0	34
variance	-7	0	-6	-4	-3	-3	6	-3	-3	6	-3	-3	-1	-1	-23
No of patients	4	6	11	3	4	5	11	8	8	2	1	1	1	1	63
															111

-40%

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Source SUS INPAT COSTED

File Name \\cyh\private_folders\murray.heath\Desktop\IND264 COPD telehealth evaluation.xlsx\summary



Northern, Eastern and Western Devon
 Clinical Commissioning Group

ACS - COPD / Asthma	ACS - Chronic ob	ctive pulmonary disease
CG Locality	(All)	
Case Type	EM - Emergency	
Pseudonym	(All)	
Discharge period	(All)	
Month&Year	(All)	

Sum of Pbr Total Cost	Financial Year	Financial Month	Telecare ref	2012-03	2012-04	2012-05	2012-06	2012-07	2012-08	2012-09	2012-10	2012-11	2012-12	2013-01	Grand Total	
2010/11	Financial Year	April		£0	£0	£0	£3,365	£0	£2,862	£0	£0	£2,846	£0	£0	£6,227	
		May		£0	£0	£0	£0	£0	£0	£0	£3,997	£0	£0	£0	£10,318	
		June		£0	£0	£0	£0	£0	£0	£0	£560	£0	£0	£0	£560	
		July		£0	£0	£0	£0	£0	£0	£0	£3,475	£0	£0	£0	£3,475	
		August		£0	£0	£0	£0	£0	£0	£5,796	£0	£0	£0	£0	£5,796	
		September		£0	£0	£0	£0	£0	£0	£1,711	£0	£0	£0	£0	£1,711	
		October		£0	£0	£0	£0	£0	£0	£3,458	£4,572	£0	£0	£0	£8,030	
		November		£0	£0	£2,846	£0	£0	£0	£0	£2,286	£0	£0	£0	£0	£5,132
		December		£0	£0	£2,286	£2,286	£0	£0	£3,997	£0	£0	£0	£0	£0	£8,569
		January		£0	£0	£3,475	£0	£2,286	£4,045	£0	£0	£0	£3,458	£0	£0	£9,789
		February		£0	£560	£2,286	£0	£0	£0	£0	£2,286	£0	£0	£0	£0	£5,132
		March		£1,711	£0	£0	£0	£0	£0	£2,898	£3,475	£0	£1,711	£0	£0	£9,795
2011/12	Financial Year	April		£2,286	£0	£1,711	£0	£0	£1,711	£0	£0	£0	£0	£0	£3,997	
		May		£1,711	£2,286	£0	£0	£0	£0	£1,711	£0	£0	£0	£0	£7,419	
		June		£0	£0	£0	£0	£0	£0	£3,475	£2,898	£0	£0	£0	£6,373	
		July		£0	£2,286	£0	£0	£0	£0	£1,711	£0	£0	£0	£0	£3,997	
		August		£1,711	£2,862	£0	£0	£0	£0	£0	£0	£0	£0	£0	£6,859	
		September		£0	£0	£2,286	£0	£0	£0	£0	£0	£0	£0	£0	£2,286	
		October		£4,572	£0	£0	£0	£0	£0	£2,862	£0	£0	£0	£0	£9,720	
		November		£0	£2,271	£4,572	£0	£0	£0	£0	£2,286	£0	£0	£0	£9,129	
		December		£0	£0	£0	£0	£560	£0	£1,711	£2,846	£0	£0	£0	£8,523	
		January		£2,286	£2,286	£1,711	£560	£0	£0	£2,286	£0	£0	£0	£0	£9,129	
		February		£2,286	£3,475	£6,895	£0	£0	£0	£2,271	£0	£560	£0	£0	£0	£15,487
		March		£0	£4,035	£6,321	£3,478	£0	£0	£0	£0	£0	£0	£0	£0	£13,834
2012/13 YTD	Financial Year	April		£0	£2,898	£4,572	£560	£0	£2,286	£0	£560	£4,572	£0	£0	£15,448	
		May		£0	£560	£0	£560	£0	£2,898	£9,271	£0	£0	£0	£0	£13,289	
		June		£0	£2,286	£2,286	£0	£0	£3,475	£0	£4,572	£1,711	£0	£0	£14,330	
		July		£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
		August		£0	£0	£2,286	£0	£0	£0	£0	£0	£560	£1,711	£2,862	£0	£7,419
		September		£0	£0	£0	£0	£0	£0	£0	£0	£5,184	£4,572	£0	£9,756	
		October		£0	£2,898	£560	£0	£0	£0	£0	£0	£1,711	£2,898	£0	£0	£8,067
		November		£0	£3,475	£2,286	£3,475	£0	£0	£0	£2,286	£0	£0	£0	£0	£14,997
		December		£0	£3,475	£0	£0	£0	£0	£2,898	£3,475	£0	£0	£0	£0	£11,557
		January		£3,475	£4,035	£0	£2,286	£0	£0	£1,711	£3,475	£560	£0	£0	£0	£15,542
		February		£2,286	£0	£2,271	£0	£0	£0	£0	£6,373	£3,475	£2,898	£0	£0	£17,863
		March		£0	£5,761	£0	£560	£0	£0	£0	£2,286	£0	£0	£0	£0	£8,607
Grand Total			£22,324	£41,974	£43,464	£22,822	£20,106	£55,848	£36,226	£33,783	£21,820	£3,422	£6,373	£308,162		

Pre	£16,563	£19,501	£26,357	£8,564	£5,729	£17,318	£0	£10,316	£9,181	£0	£2,898	£116,427
Post	£5,761	£19,015	£9,689	£6,321	£2,286	£8,084	£17,895	£4,035	£2,898	£560	£0	£75,544
Variance	£10,802	£486	£16,668	£2,243	£3,443	£9,234	£17,895	£6,281	£6,283	£560	£2,898	£39,883

-34%

6. **Have you had prompt reminders to take daily readings?** Yes / No

7. **Have you had a call each time your results varied ?** Yes / No

8. **Have the call staff (TICK all that apply)**

- been helpful?
- given good advice?
- been reassuring?
- called when you needed a call?
- advised you so that you have been able to look after yourself better that day?

9. **How often have the call team had to ring to offer advice about your condition?**

0, 1-3, 4-6, 7-10, more (please circle one answer)

10. **What time of day do you usually take your readings?** _____

11. **Is there a pattern to when you will have a crisis and need help?**

Yes / No

If yes when does this happen? _____

12. **In the last year roughly how many times when your COPD got worse, have you had to**

- call your GP urgently? _____
- needed a home visit from your GP _____
- rung the out of hours doctor _____
- rung 999 for ambulance help _____
- had to be taken to hospital _____
- had to spend a period of time in hospital _____

13. **Over the last year how has your health and care changed?**

	More	Same	Less
Your confidence in managing your health			
Your ability to predict crises			
Your need to see a doctor			
Your need to go into hospital			

14. Has this year's pattern of crises been different from previous years?

Yes/ No

If yes, can you tell us more?

15. Managing your own health How would you rate?

	1	2	3	4	5
Having no machine or daily readings but regular contact from a health professional eg a practice nurse					
Having only the machine and daily readings and training how to use it					
Having both the machine and the call centre to back up the machine					
Having the machine and call centre for the first 3-6 months and then the machine only					

16. Would you recommend telemedicine to a friend or family member who had COPD? Yes / No

Is there anything else you would like to say about telemedicine?

Thank you for your help. Please return this questionnaire to:
Patient Advice and Complaints Team
Northern, Eastern and Western Devon Clinical Commissioning Group
FREEPOST EX184
County Hall
Topsham Rd
Exeter EX2 4QL

Appendix 3: Contract and service specification



North Devon signed
contract170212.pdf

Signed contract for telehealth

Appendix 4: Telehealth Leaflet



Telehealth
Monitoring Leaflet De