# Full Business Case – Service Development

## Title of Proposal: Integrated Pulmonary Rehabilitation Pilot

<table>
<thead>
<tr>
<th>Author Name and Role:</th>
<th>Name &amp; role of person(s) who will present to the Commissioning Decision Panel*:</th>
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<tbody>
<tr>
<td>COPD Integrated Care Pilot Steering Group</td>
<td>Caroline Sprake, GP Lead Integrated Care Pilot North Tyneside; PBC Lead for NW N Tyneside</td>
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<thead>
<tr>
<th>Date of proposal:</th>
<th>Proposing Organisation(s) &amp; constitution:</th>
<th>Proposed Provider Organisation(s):</th>
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<tbody>
<tr>
<td>14/12/09</td>
<td>State if NHS, partnership, Ltd, etc COPD Integrated Care Pilot Steering Group</td>
<td>Participating general practices North Tyneside Community Services Northumbria Healthcare Trust</td>
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</tbody>
</table>

## Stakeholder Support

Prior to presenting to the Commissioning Decision Panel you should gain, and evidence, support from the following key stakeholders.

<table>
<thead>
<tr>
<th>Name of sponsoring PBC Meeting:</th>
<th>Meeting date support agreed for business case*:</th>
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<tbody>
<tr>
<td>This should be one of the Newcastle PBC Meeting, North Tyneside PBC Meeting, Northumberland Clinical Executive meeting or the NoT PBC Forum.</td>
<td>Provide the date of the relevant PBC meeting at which this business case was formally supported</td>
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<tr>
<td>North Tyneside PBC Chairs Meeting</td>
<td>2/12/09</td>
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<tr>
<th>Name of Lead Commissioner within NHS NoT:</th>
<th>Commissioning Lead support agreed*:</th>
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<tr>
<td>Jill Mitchell</td>
<td>Attach an email from the Commissioning Lead describing their support</td>
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<tr>
<td>Jill Mitchell (to be confirmed)</td>
<td>Caroline Sprake, NW NT PBC Lead, presenting bid</td>
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## Proposal Detail

**Description of proposal**

Include objectives, Scope of Service, Critical Success Factors, Patient Pathways, Location(s) where service will be delivered

**Background**

Pulmonary rehabilitation is defined as a multidisciplinary programme of care for patients with chronic respiratory impairment that is individually tailored and designed to optimise the individual’s physical and social performance and autonomy. *(National Institute for Clinical Effectiveness Chronic Obstructive Pulmonary Disease Guidelines)*

There is significant research evidence for the benefits of pulmonary rehabilitation in COPD patients, but only a partial service is available for patients in the North of Tyne area, with significant waiting lists for hospital based pulmonary rehabilitation and patchy community-based service provision. Current waiting lists at NTDGH are 16 weeks, and there is a DNA rate of 20%.
Emerging data from the NW PBC review in North Tyneside suggests significant numbers declining pulmonary rehabilitation and very low numbers of patients referred; there is also evidence of cross-boundary issues for access to service post-Newcastle admission of North Tyneside practice patients. A pilot in another North of Tyne locality providing community based pulmonary rehabilitation has ended due to lack of take-up of service, despite waiting lists for secondary care provision. These observations would indicate the need for significant awareness raising in general practice, enhanced skills in motivational interviewing and care planning, an integrated approach across the health economy with a single referral mechanism coordinated from primary care, and ability for patients to move between the service elements as appropriate to their changing needs.

COPD is one of a number of long-term conditions where patients benefit from rehabilitation programmes combining self-management approaches, lifestyle changes and exercise programmes. The Tiered model approach developed for this pilot is intended to be generic and equally applicable to other chronic disease including cardiovascular disease, diabetes and arthritis; it is intended that evaluation considers the strengths, limitations and transferability of this approach to other disease groups and geographical areas.

**Proposal**

The proposal is to pilot a model of integrated pulmonary rehabilitation across both the community and secondary care to maximise access to and engagement with both exercise and self management support from diagnosis to life end. This would build on the strong foundations for COPD-working in North Tyneside and be focused on all COPD patients in the 15 practices participating within the North Tyneside Department of Health COPD Integrated Care Pilot (ICP).

This would both enable testing of the model in a ‘best-practice’ environment where many of the cultural and educational issues have been overcome, and would therefore improve the robustness of the evaluation. The pilot would complement the PBC service reviews in both the Whitley Bay and NW PBC areas, and inform the future commissioning of pulmonary rehabilitation services across North of Tyne; in particular data routinely gathered as part of the pilot will inform the needs assessment and modelling for a future service.

It would also significantly enhance the work of the high-profile national ICP, which aims to use a care planning approach delivered by generic primary/community care workers to implement the agreed COPD pathway; currently the pilot is unable to ensure delivery of a key part of the pathway - namely pulmonary rehabilitation.

**Objectives**

The key objectives of the proposal are to:

**Service outcome/output related:**
- Ensure equitable service provision for the housebound
- Reduce/remove existing waiting lists for pulmonary rehabilitation for COPD patients, in particular for those discharged from hospital following COPD exacerbation
- Improve DNA rates through delivery of services at the point in time when patients are most motivated to change behaviours
- Ensure delivery is tailored to meet patient need, aspirations and circumstances, changing over time as required
Thus enabling:

- Improved health-related quality of life, reduced dyspnoea and increased exercise performance for pilot patients
- Reductions in acute health service utilisation (especially readmission) and reduced overall health care costs

**Service development related objectives:**

- Identify a service model which is consistent with best available evidence of cost-effective practice and which achieves the above outcomes/outputs
- Identify the workforce required to deliver the model
- Identify the costings required to achieve comprehensive and value for money delivery
- Harness skills, expertise and existing resource in both primary and community care
- Reduce duplication of service and over-reliance on secondary care provision
- Move care provision closer to home and accessible to the housebound
- Test the above model within a best-practice environment
- Inform and complement the NW (North Tyneside) PBC service review (COPD – Exercise Component of the Pulmonary Rehabilitation Pathway) and the Whitley Bay (North Tyneside) PBC Review (COPD – an new pathway for the diagnosis and education of patients with mild/moderate COPD), and their subsequent recommendations
- Support and complement the North Tyneside ICP, ensuring that a key part of the COPD pathway is in place to allow local and national evaluation of the ICP impact
- Inform future commissioning of pulmonary and other chronic disease rehabilitation programmes for patients with chronic disease across the North of Tyne and potentially more widely

The proposal would enable access to integrated pulmonary rehabilitation for all COPD patients, registered with the 14 practices participating in the Department of Health Integrated Care Pilot in North Tyneside. In addition, other COPD patients registered with the practices will be able to access the pilot service; this provides potential for referral of another 3,000 patients with mild COPD (QMAS 2009).

**Whilst final numbers are unknown (as dependent on the numbers entered into the pilot during the ICP lifetime, and the capacity for primary care to actively refer non-pilot patients) it is anticipated that approximately 300 patients with COPD will be referred into integrated pulmonary rehabilitation services during the lifetime of the pilot.**

The critical success factors include:

- An easily understood model with a single set of clear access criteria
- Transferability of model to other chronic disease areas
- Sufficient resource to enable appropriate and timely access by patients to different components of the model
- Key worker (and other primary care clinician) engagement in identifying needs and supporting patients through the system
- Key worker (and other primary care clinician) delivery of aspects of the model such as development of patient self-management skills
These last two factors are dependent on the knowledge, expertise and confidence of key workers and other primary care clinicians, and will require secondary care and peer support; the existing ICP work provides a strong basis for this, a cohort of motivated and engaged practices and clinicians, and hence an optimal environment for model testing.

**Pathway**
The 3-tier model is based on MRC Dyspnoea (MRCD) scores with the 2 essential evidence-based components of exercise and self-management skill enhancement running throughout:

**Tier 1 (MRCD 1-2)**
- **Exercise** – general advice/encouragement/motivational interviewing etc from the key worker/primary care clinician +/- Exercise Referral. This existing service may result in either attendance at a LA centre (at some cost to the patient), or access to a 12 week therapeutic exercise programme at a Healthy Living Centre, delivered through a Health Trainer. Those considered to require ongoing support are referred on after 12 weeks to LA Centres.

- **Self-Management Skills** – through the key worker or other primary care clinicians; (proposed access in the future (once established) to Information Prescription Services if considered additional support required). Those with disabling psychological problems despite mild disease may be referred for Tiers 2 or 3 support. KW will be asked to monitor cases where they consider CBT may be useful but no referral made.

**Tier 2 (MRCD 3-4)**
- **Exercise** – Community-based 12-week group programme delivered by experienced Health Trainers in Healthy Living Centres; all patients at MRCD4 would be initially assessed by a respiratory physiotherapist (NHCFT) prior to the course to ensure safety and appropriateness, and support the health trainers in programme design.

  The Dudley & Meadowell HLCs will provide protected time for these sessions on one afternoon each week. Each 12 week programme will consist of an initial induction, a 6 week review with feedback direct to the GP and Key Worker, and 8 week pre-exit interview to discuss ongoing options and a 12 week exist review. Formal risk assessments will be undertaken throughout the process.

- **Self-Management Skills** – 2 half-days of group education delivered at the start and finish of the Tier 2 Programme by colleagues from the Specialist Respiratory Nursing Team and Clinical Psychology alongside the Health Trainers. Those where disabling anxiety/depression does not resolve, or it is preventing them engaging with the programme may be referred on for 1:1 CBT.

**Tier 3 (MRCD Complex 4 - 5)**
- **Exercise** – for those for whom Tier 2 support is unsuitable because of significant co-morbidities, housebound status/lack of transport +/- or complex psychosocial issues):
**Either** a 6-week specialist hospital-based group exercise programme,

**Or** if housebound, a 6-week home *Maximising Mobilisation* programme designed by a respiratory physiotherapist with OT support and delivered by a generic worker.

Where exercise/mobilisation is not appropriate (due to disease severity/end of life) primary care workers are supported by OT, SPUDS/Outreach/Palliative care.

Respiratory Physiotherapy assessment will be undertaken for all MRCD 4 and 5 patients prior to any exercise programme. Where patients have been admitted this will generally take place prior to discharge. For other patients assessment will take place within 4 weeks of referral in a venue as indicated by the patient’s circumstances, so may be in the patients own home, local HLC or hospital out patient department.

- **Self-Management Skills** – as in Tiers 1&2 except for those where anxiety/depression/distress is preventing them adjust/cope or engage in other rehabilitation services, who will be offered referral to 1:1 clinical psychologist/psychological therapist (CBT) support in hospital outpatient or domiciliary settings.

The role of the key worker/primary care clinician in assessing patient needs, referring as appropriate, coordinating the elements of tiered support required, and continuing to provide continuity of care and ongoing support, is vital to success.

Intrinsic to the model is the ability for the key worker/primary care clinician to facilitate patient movement between the tiers as is required on an ongoing basis.

Secondary care specialist support (respiratory team, physiotherapy and psychology) is required for training, mentorship, ‘supervision’ and support of key workers/primary care clinicians/exercise trainers/generic workers, and specialist advice and intervention for more complex patients.

**Referral**

Access will primarily be via key worker/primary care clinician referral using inclusion/exclusion criteria having assessed need and motivation with the patient as part of the care planning process. Patients may also be referred by secondary care following admission or outpatient contact, with a copy of the referral form sent to the key worker/practice. (The referral approach is intended to ensure that the key worker is able to act as care co-coordinator, pick up those admitted who have not been referred by secondary care providers (including NUTHTs), but ensure automatic referral of those admitted wherever possible.

A single referral form will allow co-ordination by the key worker, with easy movement of patients between the tiers as necessary, and enable evaluation of rehabilitation demand and capacity requirements.

Referrers will triage the patient’s requirements to the appropriate level of rehabilitation, and send the referral form to that Tier provider. Tier providers will feed back to the referrer upon completion of their intervention and/or where further input is considered appropriate.
Assessment and programme initiation is expected within 4 weeks of referral for those at Tier 3 and/or recent COPD admissions, and 6 weeks for all others.

**Service delivery locations**

Settings are dependent on the tiered need:
- Patient’s home – for housebound patients via key workers/primary care clinicians supported by OTs/physios/psychologist and at Tier 3/end of life
- GP practice – via key workers/co-coordinating primary care clinician(s) - all Tiers
- Other community settings including LA Gyms and (Healthy Living Centres x 3) – Tier 1 & 2 service provision
- Hospital (NTDGH) – Tier 3 service provision

The pathway introduces a comprehensive approach which shifts existing pulmonary rehabilitation services into community settings and away from secondary care, making optimal use of existing services. Provision is included for housebound patients improving equitable access to service.

**The approach has been developed as a generic model, transferable to other chronic diseases and other locations:**

The 2-strand approach encompassing exercise and self-management is fundamental to all rehabilitation programmes for those with long term conditions. At all Tiers the role of the key worker as co-ordinator and case manager is central to the evolving nature of proactive chronic disease management by primary care. Tier 1 services are widely available, are relatively standardised and add low-key individualised support to what the Key Worker is able to provide; ideally patients would be able to easily transfer between localities to suit their needs. Tier 2 services are more intensive, but still focused on the 2 strands; they can be provided by health trainers and other workers across a range of conditions, although specialist support and education for these workers is an essential part of their CPD and service development. Elements of Tier 2 self-management such as the 2 half-day education sessions are disease specific. Tier 3 services are for those most vulnerable patients and are delivered by specialised staff, but still often across a range of conditions eg CBT 1:1 provision, as well as by disease specific specialist eg respiratory physiotherapists.

The model aims to target specialist and expensive resource at the most vulnerable, but still enables proactive individually tailored management for those with more mild disease; the model seeks to move away from a One-Size-Fits-All blanket approach to one which makes best use of scarce resource, and which enables generic workers to manage routine chronic disease care.
Description of Current Position

There are currently significant waiting lists for hospital based pulmonary rehabilitation programmes in North Tyneside – NTDGH waiting lists are over 8 weeks despite adding in additional numbers to group programmes. Patients referred to these programmes are predominantly those referred from consultant clinics and/or recently admitted with an exacerbation - an important opportunistic window of motivation is likely to be missed as a result of waiting times; this assumption is backed up by currently high DNA rates of 20%.

In addition patients who have not been admitted are unlikely to receive comprehensive pulmonary rehabilitation services despite the strong evidence of their benefit; whilst there is access to exercise programmes through Exercise on Prescription and HLCs etc, the self-management component of rehabilitation is key to success and it not currently delivered comprehensively in out of hospital settings. In addition, the HLC services are extremely over-stretched and are currently attempting to manage across the tiers; this has resulted in developing waiting times, currently around 4 weeks for all new referrals. They are unable to provide group sessions currently due to HLC facilities and commissioned opening times.

Of critical importance in successful delivery is the ability for the key worker/primary care clinicians to work with the patient to identify their needs and motivation in order to design a programme suitable to their circumstances and help the patient move between Tiers as these circumstances change – this flexibility is not currently readily available, and the primary care clinician role in rehabilitation is often minimal.

There are also difficulties relating to cross-boundary issues; for example access to gym services in Newcastle for North Tyneside patients, and referral by NUTHT to pulmonary rehabilitation for North Tyneside patients.

There is limited clinical psychology resource available for COPD patients despite the incidence of anxiety and depression amongst more complex patients. Current waiting times for 1:1 clinical psychology for respiratory patients are around 16 to 18 weeks.

Of key importance is the current lack of specifically targeted and comprehensive service provision for the housebound, although colleagues do endeavour to provide some support on an ad hoc basis.

Strategic alignment

How does the proposal support and align with e.g. the Strategic Plan, AOP, Health needs, Core objectives, Vital signs, Compliance with national and local targets

North Tyneside PCT has some 4,200 patients identified through QMAS (2009) with COPD; with prevalence rates anticipated at higher than the national 4% this strongly suggests significant under-diagnosis and suboptimal management. 2003-2005 data showed excess deaths of 401 and percentage of total excess deaths of 7.7 and 15.6 for males and females respectively.

There is a strong body of international evidence that pulmonary rehabilitation reduces dyspnoea, increases exercise performance and increases health-related quality of
life; a growing body of evidence is also beginning to show effectiveness in reducing health care costs including readmission rates.¹

Pulmonary rehabilitation is identified by NICE COPD Guidelines (2004) as an effective way to promote self-managements and confidence in coping – a central aim of evidence-based COPD care.

However, the North Tyneside BTS audit (2008), of COPD identified community pulmonary rehabilitation as a gap in service; even with presumed significant under-diagnosis, current hospital programme have waiting lists of 4-5 months, and some areas of Northumberland/North Tyneside have no local access.

This proposal for an integrated pulmonary rehabilitation service reflects national policy for earlier intervention, integrated and personalised care, support for education/information provision and greater self-management by those with long term needs; this is in line with “Our Health Our Say, Delivering care Closer to Home” (2006), “Our Health, Our Care, Our Say: a New Direction for Community Services” (2006), “Delivering care Closer to Home: Meeting the Challenge” (2008), “Supporting People with Long term Conditions: Commissioning Personalised Care Planning” (2009) and many other key policy documents. The proposals will also ensure compliance with NICE COPD guidelines.

The proposal is in line with the key Department of Health objective of access to personalised and effective care which includes as a ‘Vital Sign’ “the proportion of people with long term conditions supported to be independent and in control of their condition”, “rates of hospital conditions for ambulatory sensitive conditions”, and “emergency bed days per head of weighted population”.

Locally the SHA document “Our NHS, Our Future – North East Vision” supports patient-centred clinically driven pathways that will improve quality of life, empower the patient to make informed choices, and ensure alignment across primary and secondary care minimising variation and inconsistency.

The proposal is in line with the NHS North of Tyne Annual Operating Plan (2009/10) Objective 6 (Goals 6.1 & 6.2) – delivering high quality planned patient pathways thus supporting a reduction in dependence on hospital care and improvement in the experience of rehabilitation.

NHS North of Tyne Commissioning Strategy Objectives include:

- Objective 1 – provide a stable and sustainable primary care environment, through which a broad range of high quality services, easily access to all members of the community can be delivered in order to meet health need and support the delivery of health outcome objectives (this proposal aims to strengthen the role of key worker/primary care clinicians ad the overall gatekeeper and coordinator, ensure services are equally available to the housebound, and support primary/community service in care planning roles for those with long term conditions)


• Objective 6 – Work to help people to receive the highest quality of planned care, whilst improving the choice of services available outside of hospital settings to be delivered by an increasingly diverse range of clinical professionals at a time and a place that is appropriate to the patient (the proposal allows service provision tailored to patient needs and circumstances with easy movement between the tiers)

• Goal 3 – Improve Access to primary and community care services for all members for the community (the proposal explicitly makes provision for the housebound previously largely excluded from rehab services)

• Goal 4 – Improve services closer to home (the proposal provides services in a variety of settings including the patients home and community settings)

• Goal 16 – Reduce the dependence on hospital care (there is evidence to support the role of pulmonary rehabilitation with both exercise and self-management components in reducing hospital admissions/readmissions and in reducing A&E attendances)

How have patients been involved / how will patients be involved

Mechanisms developed through the Integrated Care Pilot will be used to involve patients and carers. This already includes media coverage, patient newsletters, links with BLF and local Breathe Easy groups, focus groups, regular items in BLF communications, and patient and BLF representation on ICP Steering Group.

<table>
<thead>
<tr>
<th>Proposed commencement date of Service*</th>
<th>Estimated duration of contract</th>
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<tr>
<td>February/March 2010</td>
<td>17 months – this ensures service provision for all ICP patients to be completed (costings only required over 14months).</td>
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Activities to be undertaken in the lead time between CDP agreement of the business case and actual commencement of Service

Please consider and list the activities. Does this list result in a change to the above proposed commencement date of Service?

• Confirmation of referral processes
• Communication with participating practices regarding services, referral mechanism, key worker/primary care clinician role
• Confirmation of available capacity within CBT, exercise on prescription, information prescription services etc
• Recruitment of additional staff to increase capacity at Tier 1 and provide Tier 2 & 3 programmes in community and hospital settings.
• Agreeing and implementing service co-ordination systems and processes
• Setting up of activity and performance monitoring systems

Clinical and non-clinical Governance arrangements
Consider patient safety, evidence of effective clinical outcomes, accountability, decision making bodies, leadership
The service strands are provided via a number of existing NHS providers who will work within the managerial and governance arrangements of their employing organisation/GP practice; accountability of individual workers is via their employing body. Training and education will be provided by NHCFT specialist respiratory team members for non-specialist primary/community workers including key workers/primary care clinicians, and health trainers. NHCFT specialist respiratory team members will also provide mentoring, supervision and support as agreed with general practices and NTPCT Community Services. CBT services, provided by NHCFT remain under the Trust clinical governance arrangements.

Leadership and co-ordination will be supported by the Integrated Care Pilot Steering Group who will oversee and advise this pilot, and ensure involvement by employing bodies as appropriate. The overall clinical leadership for the pilot service will be provided through the NHCFT Specialist Respiratory Nursing Team.

Formal risk assessments are carried out at all Tiers of the programme. At Tier 2 Health Trainer risk assessments (which include pulse oximetry) are further supported by an initial specialist physiotherapy assessment for all MRCD4 patients prior to programme start. The holistic programmes are individually tailored and all based on best available practice and evidence including NICE Guidance, with induction and regular and exit reviews to enable participants to derive maximal outcomes and achieve long-term improvements and goals.

### Cost/benefit rationale*

*Please attach detailed tables as necessary. Consider costs per patient/session/attendance, as well as current and future volumes To be completed*

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<th>Costs – capital</th>
<th>Costs – non recurring revenue</th>
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<td>Year 1 (09-10)</td>
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<td>Year 1 (09-10) £2,808</td>
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<td>Year 2 (10-11)</td>
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<tr>
<td>Year 2 (10-11)</td>
<td>£0________</td>
<td>Year 2 (10-11) £0________</td>
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Please provide a breakdown of figures as appropriate

*Continue on a separate sheet / spreadsheet if appropriate*

See appendix

**Known Funding available**
The pilot integrates existing funded services seeking to improve access to these and reduce potential for gaps and duplication across the system. Funding ‘available’ therefore includes existing:

- Hospital based pulmonary rehabilitation
- Exercise on prescription/exercise referral services
- 1:1 chronic respiratory disease clinical psychology provision (3 sessions pw)
- HLC therapeutic exercise services for those with long term conditions
Funding through the Department of Health as part of the ICP enables support and education of the key workers and practices. It also enables project support for the ICP which can be drawn upon to support implementation of this critical element of the COPD pathway for ICP patients.

Non-financial and intangible Benefits

- Greater equity of service as housebound provision
- Empowered and informed patients, able to manage their own illness and address lifestyle factors
- Improved quality of life; reduced dyspnoea
- Clarity of pathway
- Reduced potential for duplication of and gaps in service; tap in to existing funded service provision
- Piloting of a generic model which can be used as a template for rehabilitation services North of Tyne

Which budget or fund from which money is being requested*

SIF or PBC Freed-Up Resources North Tyneside

Contracting and Activity

Population affected

* e.g. whole PCT, single locality, single practice
All COPD patients in 14 (Friarsleigh now combined with another) practices participating in the Department of Health Integrated Care Pilot - North Tyneside COPD. This includes the COPD patients meeting the criteria for the ICP (FEV1 <60% predicted plus >2 exacerbations treated with steroids and antibiotics or hospital admission for COPD within the preceding 12 months) as well as all other COPD patients diagnosed to date or in the duration of the pilot.

It is estimated that in the lifetime of the pilot, 300 patients (ICP and non-ICP) will be positively identified and their pulmonary rehabilitation requirements assessed with appropriate referral made to the Tiered Services.

Activity assumptions applied to the cost/benefit analysis

Include the expected shifts in activity compared to the current pathway, given as an actual number of referrals/admissions (rather than “5% decrease…”). Also include the setting of care (outpatient, inpatient etc.) and the specialties and/or HRGs that have been assumed in the analysis. In addition include other activity assumptions e.g. new to review ratios applied, conversion rates, % reduction in referrals assumed, implications on other services such as Pathology and Diagnostics. Wherever possible, include or attach the detailed workings behind these assumptions and identify any additional costs that would be over and above tariff.

The following assumptions have been made:

- 300 patients from ICP participating practices will be referred for pulmonary rehabilitation; 66% of these will be formally part of the Integrated Care Pilot; others will not meet criteria for ICP inclusion but will be identified by primary
care workers as able to benefit from pulmonary rehabilitation

- 210 patients (70%) are Tier 1
- 45 (15%) patients are Tier 2; half of these patients (23) are MRCD4
- 45 (15%) patients are Tier 3; two thirds of these patients (30) are housebound
- Group sessions require 2 staff members and are best run with 8 patients
- Current waiting times for hospital based pulmonary rehabilitation are 8 week and >21 patients requiring 3 programmes to clear the backlog
- 24 patients in total will require 1:1 CBT services (ie Tier 3 Self-management)

**Tier 1**

- 210 additional new referrals for Exercise on Prescription; assumed that 42 of these will access LA centres with the remaining 168 referred to HLC therapeutic exercise (these costs will be largely absorbed although assistance is requested with overheads and equipment costs)
- Education/training/mentoring/supervision/support to key workers, primary care clinicians/council workers – NHCFT Specialist Respiratory Nursing and Clinical Psychology

**Tier 2**

- 45 additional new referrals to 3 Healthy Living Centres for total of 6x12 week group exercise programmes - NTPCT at an annual value of £9849; NHCFT physio assessment of all MRCD4 patients £783 (estimated 23 total) and Health Trainer support at an annual value of £4,368
- 2 x half-day self-management skills sessions at beginning and end of 6 group programmes – NHCFT (HLC) at an annual value of £1,684 plus CBT input of £1,799

**Tier 3**

- Capacity programme/waiting list initiative; 3 programmes for 24 patients - NHCFT at value of £4,212 (once only); (plus CBT elements £150)
- 15 additional referrals to hospital based 6 week programmes x 2 - NHCFT Outpatient setting at an annual value of £2,808 (plus CBT elements £100);
- 30 new referrals to a domiciliary rehabilitation programme - NHCFT(Outreach) at an annual value of £7,370
- OT/SPUDS/Health psychology severity/complexity/end of life assessment and support NHCFT (Outreach) at an annual value of £9,360
- 24 new referrals to clinical psychologist/psychological therapist (CBT) NHCFT Outpatient setting resulting in average of 7 OP or domiciliary appointments over a 7 month period at an annual value of £8,264

**Other**

- CBT training of other workers plus own supervision/CPD at an annual value of £1,938

- There are possible savings on IP admissions and A&E attendances – research might suggest 10% but this has not been formally costed as cannot be accurately quantified at this stage
- Fewer GP/NDUC/ECP contacts during exacerbations – not costed
Transport
For the purposes of the pilot it is assumed that patients unable to manage own travel arrangements will automatically be triaged to Tier 3, and make use of existing PTS facilities; it may be appropriate as part of evaluation to explore PTS provision to community venues such as HLCs.

Data Source(s) used
e.g. MIDAS, referral database, data from provider
Data sources used in addition to literature have been from the Integrated Care Pilot (using MIDAS data and QMAS data via MIIQUEST) to identify target patients and MRCD scores, and activity, performance and clinical data from secondary care (NHCFT) regarding existing pulmonary rehabilitation provision and service users.

Activity implications on current providers (and/or whole health economy)
Include, by the name of each provider, the full-year expected reductions or increases in activity compared to the current pathway and the associated financial value. e.g. 100 less ENT referrals to XXX Hospital Trust at an annual value of £x. Any requirement for patient transport services should be noted here.

See section above

Necessary Contract Variations
Some contract changes require a period of notice to the current provider (usually six months). Please state the current type of contract that will need to be varied (e.g PbR, block contract) if known, and whether this change would be considered a small, medium or significant change to the service commissioned (e.g. does this service require decommissioning of 2% of activity in XXX specialty, or 50%?)

The contract with NTPCT Community Provider Services will require a minor contract variation for Therapeutic Exercise Services, to reflect anticipated increases in HLC based exercise programmes, and to provide 6 x 12-week group sessions.

The block contract with NHCFT relating to Pulmonary Rehabilitation/ Respiratory Nurse Specialist Team and Clinical Psychology (respiratory disease) support will require a minor contract variation to extend existing services, or a separate schedule for elements within this proposal to reflect anticipated increases in hospital based exercise programmes, physio assessments, CBT provision, supervision/support of HLC programmes, domiciliary exercise programme design and delivery, education and support for key workers, and for individual patient complexity/end of life support.

Evaluation and Monitoring Arrangements
How will qualitative and quantitative benefits be measured and realised:

Evaluation measures used will include:

- Numbers of referrals to each Tier/strand
- Numbers completing Tier 2 and 3 exercise programmes
- MRCD Scores
- Quality of Life Questionnaires – either the SGRQ or CRDQ
- Participant satisfaction questionnaires via NHCFT R&D Dept – to all those referred
- Costs per patient
- Retrospective data for IP spells and A&E attendances for COPD
- Questionnaires and group discussion with Tier providers
The first 2 measures will be manually measured through the referral forms and provider discharge notes. MRCD scores, QOL questionnaires, costs per patients and secondary care data will be drawn from the ICP database. Overall evaluation including participant and staff satisfaction questionnaires and group discussion will be managed jointly by the public health team lead by Dr Bharat Sibal and Dr Gbenga Afolabi in the context of programme budget and marginal savings.

How will quality standards be measured:

Quality of the overall programme will predominantly be through patient satisfaction, St Georges Questionnaire and through MRCD scores. Individual elements will identify their own quality indicators appropriate to the intervention; these will be agreed by the Steering Group and will form part of regular reporting.

How will clinical governance standards be measured:
As above, plus formal risk assessments for all MRCD4 and above patients. CG standards will be measured using CQC core standard framework requirements.

How will patient satisfaction be measured:

Patient questionnaires specific to programme, will be administered and collated through ICP questionnaire processes.

Who will be responsible for collating and presenting performance information, and at what frequency:

Note that performance management reports will be required throughout implementation of the business case (at each of 3, 6, 9, 12 months) as per the process and template available on the PBC extranet

Data (including activity and KPIs) will be collated on a monthly basis through manual reporting systems and through the data collection systems set up for the ICP. Drs Bharat and Afolabi will be responsible for its collation and presentation via the ICP Steering Group.

Other miscellaneous considerations

Key Assumptions:
See Appendix 1 and Page 11

Key Risks and mitigation:
What are the key risks and how will they be managed and mitigated

Key risks are:

- Failure by key workers/practices to refer sufficient patients to enable evaluation – mitigated by working with the already ‘educated’ and motivated ICP practices and their key workers; proposal uses a simple model which can be communicated to key workers through effective ICP mechanisms
- Patients decline referral – proposal focuses on ICP practices with patient empowerment central to approach, therefore likely to result in optimally motivated patients
- Too many patients referred and services swamped – service uptake can be monitored at monthly intervals; experience suggests numbers unlikely to be huge in first instance so unlikely to be a ‘flood-gate’ problem
How has the feasibility and robustness of the proposed Service been tested?

- All elements of the Tiered model already exist in some form and are therefore known to be feasible in terms of service delivery. What is new is their integration into a single system working across the health economy, which makes best use of resource and is flexible to patient need.
- The model is relatively simple with small amounts of additional capacity required at each Tier in this pilot phase; implementation can be rapidly achieved as workforce and other aspects will not require major changes.
- Activity assumptions have modelled the required capacity to enhance existing service provision; there is potential to flex the requirements between Tiers should the assumptions on split prove inaccurate.

<table>
<thead>
<tr>
<th>Planned procurement process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrangements for procurement if appropriate</td>
</tr>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plans for service sustainability and continuation beyond period of this proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will the Service continue and if so what are the implications</td>
</tr>
</tbody>
</table>

The service will be evaluated and decisions made in line with the findings; the service will also need to be seen within the context of the ICP and decisions concerning this approach as the two elements are inter-twined. Funding implications are relatively small but will need to be prioritised against other areas; savings demonstrated may allow for movement of resources within the wider COPD programme budget.

(If the approach is seen as a potential model for all chronic disease rehabilitation across North of Tyne, then this will require significant realignment and redistribution of exercise and rehabilitation resource.)

<table>
<thead>
<tr>
<th>Implications for existing contracts and providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>If appropriate</td>
</tr>
</tbody>
</table>

Minor contract variations will be required. Providers are confident they will be able to deliver the services in line with the proposal. The proposal will clarify current ambiguities in rehabilitation commissioning and assist future contract negotiation.

<table>
<thead>
<tr>
<th>Estates implications</th>
</tr>
</thead>
</table>

None

<table>
<thead>
<tr>
<th>ICT Implications including meeting information governance &amp; security requirements</th>
</tr>
</thead>
</table>

Evaluation data will require Caldicott approval from participating organisations; the majority of data used will be gathered through ICP arrangements where robust security measures and information sharing arrangements are already in place.

<table>
<thead>
<tr>
<th>Human Resource Implications</th>
</tr>
</thead>
</table>

These will be managed by individual employing organisations to ensure appropriate HR practice for the appointment of any new staff, additional hours, training, supervision and appraisal. Etc. The pilot proposal does not constitute a major service change.
**Project management arrangements**
*For preparation/implementation of the service in this proposal*

The Project Management Arrangements for the ICP will be used to progress further preparation and implementation of the proposals. This includes a dedicated project manager, senior managerial and clinical oversight, and a Steering Board which meets regularly and which comprises all interested parties. A Partnership Agreement is in place.

**Transitional arrangements**
*Any specific considerations if/when moving from current to proposed Service*

Training and communication for key workers/practices and Tier 2 Health Trainers will be required prior to service start. There is also a need to clear existing Tier 3 backlogs for hospital based pulmonary rehabilitation to enable pilot patients to access services within the desired ‘window of opportunity’.

**Access Arrangements**
*Days/times service will be available, transport inc. PTS, car parking, disabled access, interpretation service*

No specific additional access arrangements are required. Patients requiring travel assistance will automatically qualify for Tier 3 services and therefore PTS. Housebound patients will receive domiciliary care.

**Referral booking arrangements**

Referrals will be made on a single form by the key worker to services at the appropriate Tier. Referrals will then be managed directly by each service, which will be responsible for communication with the patient and feedback to the referrer.

**Communication arrangements**
*With patients and other healthcare organisations*

Patients will be contacted directly by providers regarding appointments etc. Those in the ICP will be encouraged to use their patient held record and ask professionals to also make use of these.

All key workers/practices will be communicated with at the end of the provider contact, and where appropriate will be notified of progress at other intervals.

Where required, as for other services, health care professionals will liaise with others by phone/letter etc to communicate issues and integrate patient care.

**Exit strategy at end of service period if appropriate**

On-going rehabilitation and sustained life-style changes are a key component of the programme and education and advice is provided at all Tiers. Patients will be moved between the Tiers as appropriate – for example at the end of a Tier 2 programme the participant may be referred to a Tier 1 LA gym. Those in Tier 3 may be referred on for domiciliary or even end of life care. Ongoing continuity and support will be provided by the key workers who will liaise as appropriate and re-refer is necessary.

At the end of the pilot period should the model not be supported to continue further, all referred patients will complete their ‘course’ of intervention – for example all exercise programmes will be completed as will CBT 1:1 outpatient sessions. Practices would be advised not to make further referrals – any received would be returned to the referrer with advice regarding continuing arrangements.
<table>
<thead>
<tr>
<th><strong>Contingency and Remedial action plan if service does not meet expectations</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance data will be reported on a monthly basis to the ICP Steering Group which will determine remedial action to be taken. This may include changes to the service model, levels of activity, communication with key workers/practices or training issues.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>How has equality and diversity been considered</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The key equality/diversity issue for pulmonary rehabilitation services relates to the housebound population – the proposal explicitly develops a new service element for this group – this meets an existing gap in service provision (currently provided on an ad hoc basis if at all). The ICP is looking to develop ethnic monitoring which will include these patients; this already forms part of the ICP patients’ questionnaire.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Do the proposed premises meet appropriate standards including Health &amp; Safety, disability discrimination, clinical regulations inc. waste disposal</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes – all premises are currently approved and in use by local NHS and LA Services for similar/same activities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Does the proposed service meet the guidelines as set by the NHS NoT Pathways &amp; Guidelines Group</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes – proposal enables implementation of the recently approved guidelines which is not currently possible due to lack of pulmonary rehabilitation capacity.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Does proposed equipment meet standards for electrical safety testing, health &amp; safety, sterilisation, etc.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes – in line with CQC core standard compliance by both North Tyneside PCT and Northumbria healthcare FT.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Insurance / indemnity arrangements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Clinician accreditation via Deanery as appropriate, and mentoring/training arrangements in place</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deanery accreditation - N/A Additional mentoring/training/supervision support for key workers/practices and Health Trainers is included within the proposal.</td>
</tr>
</tbody>
</table>

Whilst all sections of this business case template are important and should be completed, those marked with an * must be completed otherwise the business case will be rejected and not be considered by the Commissioning Decision Panel.
## Appendix 1

### Financial Breakdown

#### Activity Assumptions

- 300 patients from ICP participating practices will be referred for pulmonary rehabilitation; 66% of these will be formally part of the Integrated Care Pilot; others will not meet criteria for ICP inclusion but will be identified by primary care workers as able to benefit from pulmonary rehabilitation (1month/23 patients referred in 09/10 & 277 patients in 10/11)
- 210 patients (70%) are Tier 1 referrals (16 in 09/10 & 194 in 10/11); 20% (42 patients will access LA services, and 168 will opt for HLC referral
- 45 (15%) patients are Tier 2(3 in 09/10 & 42 10/11); half of these patients (23) are MRCD4
- 45 (15%) patients are Tier 3 (3 in 09/10 & 42 10/11); two thirds of these patients (30) are housebound
- Group sessions require 2 staff members and are best run with 8 patients
- Current waiting times for hospital based pulmonary rehabilitation are 8 week and >21 patients requiring 3 programmes to clear the backlog
- 24 (25% of MRCD 3-5) patients in total will require 1:1 CBT services (ie Tier 3 Self-Management) – presume all in 10/11

#### Capital -

*small values but suggested these may be capitalised*

- £3k required for pulse oximeters to support LA North Tyneside Leisure Centres which are receiving patients referred at Tier 1 and on from Tier2.
- £5k additional/replacement equipment costs for the 2 Health Living Centres
- £0.2k pulse oximeters for domiciliary Tier 3 physio input

**Capital – Total = £8.2k**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Activity</th>
<th>Cost 09/10 FYE £000</th>
<th>Cost 10/11 FYE £000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Key worker/primary care clinician</td>
<td>Expanded role; active care planning</td>
<td>210 patients</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>- absorbed in ICP provision</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Exercise on Prescription</td>
<td>210 potential additional referrals</td>
<td>42 absorbed in current LA provision; 168 requiring HLC support absorbed in current HLC provision;</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>- ( - capital and overhead assistance requested)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education/Support from NHCFT Specialist</td>
<td>Support to non-key worker professionals (KWs already receiving support)</td>
<td>Absorbed in ICP provision</td>
<td>0</td>
</tr>
<tr>
<td>Respiratory Nursing Team</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SUBTOTAL</td>
<td>0</td>
</tr>
<tr>
<td>Tier 2 HLC Group Programmes</td>
<td>6 x 12 week programmes delivered from HLC; Annual maintenance and other overheads</td>
<td>6 x 12-week programmes – 2 months delivered in 09/10; All included in</td>
<td>1,407</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4,000</td>
<td></td>
</tr>
</tbody>
</table>

---

*Full Business Case template - version 5, October 09*

*When complete, please return to CDP@northoftyne.nhs.uk*
<table>
<thead>
<tr>
<th>Service Description</th>
<th>Summary Description</th>
<th>Cost (10/11)</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiotherapy assessments MRCD 4</td>
<td>For 23 patients in HLCs - NHCFT</td>
<td>23 x 2x assessments (incl travel, prep, admin etc)</td>
<td>112</td>
</tr>
<tr>
<td>Support/education for Health Trainers for 6 programmes and ongoing CPD</td>
<td>NHCFT Specialist Respiratory Nursing Team and Clinical Psychology</td>
<td>0.5 session pw @£84</td>
<td>728</td>
</tr>
<tr>
<td>Self-management sessions from NHCFT</td>
<td>2 half days self-management programmes for 6 groups; NHCFT Specialist respiratory Nursing Team and Clinical Psychology</td>
<td>6x 2 half-day programmes – assumes all completed after 09/10 (CBT Input £1,799)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUBTOTAL</td>
<td>2,247</td>
<td>20,964</td>
</tr>
<tr>
<td>Tier 3</td>
<td>Hospital based rehab programmes - NHCFT</td>
<td>3 capacity/waiting lists (Non recurrent) plus 2 Pilot programmes (recurrent)*</td>
<td>2,808</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiotherapy assessments MRCD 4&amp;5</td>
<td>For 45 patients - NHCFT; pre-discharge for some, domiciliary or OP for others who have not been admitted</td>
<td>Assumed already built into Tier 3 programmes or domiciliary packages or pre-discharge – no additional charge</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Domiciliary rehab programme - NHCFT</td>
<td>Physio and OT assessment and design; generic worker implementation</td>
<td>7,370</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBT - clinical psychologist/psychological therapist</td>
<td>1:1 outpatient/domiciliary support</td>
<td>24 OP/domiciliary referrals for CBT</td>
<td>8,264</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OT/Health psychology/SPUDs</td>
<td>Severity, complexity and end of life outreach into patients homes plus discharge planning/training</td>
<td>2 months in 09/10</td>
<td>9,360</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUBTOTAL</td>
<td>4,468</td>
<td>29,356</td>
</tr>
<tr>
<td>Training/supervision etc</td>
<td>Clinical psychology Training of HLC and KWs plus own supervision CPD</td>
<td>0</td>
<td>1,938</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUBTOTAL</td>
<td>0</td>
<td>1,938</td>
</tr>
<tr>
<td></td>
<td>Grand total</td>
<td>6,715</td>
<td>52,258</td>
</tr>
</tbody>
</table>
Breakdown by provider:

<table>
<thead>
<tr>
<th>Provider</th>
<th>09/10 (£)</th>
<th>10/11 (£)</th>
<th>Capital (£)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NT PCT</td>
<td>1,407</td>
<td>12,442</td>
<td>5,000</td>
<td>18,849</td>
</tr>
<tr>
<td>NHCFT</td>
<td>5,308</td>
<td>39,816</td>
<td>200</td>
<td>45,324</td>
</tr>
<tr>
<td>LA Gyms</td>
<td></td>
<td></td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>67,173</strong></td>
</tr>
</tbody>
</table>

Detailed financial workings are available as required.
Notes on financial terminology

What is “revenue”?

The day to day running expenses of the service.

What is “recurring revenue” and “non-recurring revenue”?

Non-recurrent revenue relates to the one of setup costs for projects and services e.g. training, small-value equipment.

The ongoing costs of continuing training and maintenance relating to equipment are recurrent revenue.

What is “capital”?

The definition of capital is more complex. An extract from the NHS Finance Manual is therefore given below.

Capitalisation threshold of fixed assets

- The Department of Health has adopted a £5,000 capitalisation threshold for individual assets, although assets of lesser value should be capitalised if they form part of a group, with a group value in excess of £5,000, as defined below. The £5,000 figure includes VAT where this is not recoverable.

Grouped assets

- “Grouped assets” are a collection of assets which individually may be valued at less than £5,000 but which together form a single collective asset because the items fulfil all the following criteria:
  - the items are functionally interdependent
  - the items are acquired at about the same date and are planned for disposal at about the same date
  - the items are under single managerial control, and
  - each individual asset thus grouped has a value of over £250.

- Assets acquired in the course of the initial setting up of a new building or on refurbishment are also to be treated as “grouped” for capitalisation purposes.

IT assets

- It is expected that IT hardware will be considered interdependent if it is attached to a network, the fact that it may be capable of stand-alone use notwithstanding. The effect of this will be that effectively all IT equipment purchases, where the final three criteria above apply, will be capitalised.

Interdependency

- The distinction between assets that are in some way dependent on each other for their effective and efficient operation, and those that are “stand-alone” items can be a fine one. Where items are used within a system (e.g. trays of sterile instruments are designed to be used with a specific sterilisation system), those items are likely to be considered interdependent even though they also have a value in “stand-alone” use.