Detailed business case proposal:

Commissioning additional capacity for the provision of Specialist Neuro-Rehabilitation Service (SNRS) Level 2

June 2015

Version 13.8
## Amendment History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author</th>
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<tr>
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<td>V13.2</td>
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<td>Amended financials to show additional and total funding available (inc.BCF)</td>
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Executive Summary

Nationally, the demand for people with neurological conditions requiring rehabilitation following hospital admission is increasing.\(^1\) There is also substantial body of evidence to support both the clinical and cost effectiveness of providing adequate neuro-rehabilitation services.\(^2\)

Depending on the nature of neurological condition and acquired injury, patients can present with a wide range of problems which require neuro-rehabilitation intervention to address deficits, prevent and manage complications in the following areas, for example:

- **Physical rehabilitation** to manage motor deficits and improve muscle tone, ataxia, gait and coordination etc.;
- **Disability management** to address complications of spasticity and contractures, positioning and comfort; seating needs to prevent further damage and reduce pressure sores etc.;
- **Medical and nursing management** to improve, manage and prevent further complications neurological (seizures), respiratory, nutrition, bladder and swallowing complications;
- **Communication and sensory support** to manage problems of low awareness states, visual and hearing loss, expression and comprehension of language etc.;
- **Cognitive rehabilitation** to support impairment of memory, attention, social judgement, problem solving and safety awareness;
- **Behavioural and Psychological/emotional support** to manage adjustment problems, mood change, aggressive outburst, inhibitions and emotional state etc.

These deficits compromise a person’s recovery process and impact on their long-term abilities and care dependency, but may also be largely avoided by effective and timely rehabilitation.\(^3\)

This rise in demand for inpatient neuro-rehabilitation is recognised in the Tri-Borough. This is due to a lower than sufficient Level 2 Specialist Neuro-Rehabilitation Services (SNRS) for these cohort of patients.

As a result the Tri-Borough experiences substantial Delayed Transfers of Care (DTOC) in acute hospitals due to waits in accessing inpatient neuro-rehabilitation. This alone accounts for at least 40% of all patient delays for further NHS care – known as Category C delays. The average wait per patient is approximately 15 days – with some patients waiting for up to 3 months. This is based on 2013/14 and 2014/15 monthly data.

DTOC refers to the excess bed day delay between the end of a patient’s acute treatment and their transfer to the appropriate non-acute care setting. Not only might a delay in transfer negatively affect the patient and family experience and potentially delay care, it also incurs extra cost and is a strain on acute service resource.

Given that wait for rehabilitation not only impacts on the **service users experience** but also on longer term outcomes and dependency, these excess waits represents a loss of real opportunity to improve outcomes and reduce longer term costs. (National Audit for Intermediate Care 2014).

Currently, there are only **10 commissioned SNRS block beds** across the Tri-borough CCGs at the Albany Rehabilitation Unit, The National Hospital for Neurology and Neurosurgery, Queen Square.

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\(^1\) See background papers section

\(^2\) See background papers section

\(^3\) See background papers section
London. The service is commissioned by both West London and Central London CCGs and provided by the University College of London Hospitals Foundation Trust.

The current provider has served notice on the current contract to end the service by 11th September 2015.

This will exacerbate the current gap in service – as there will be no SNRS in place. This makes the current situation for Tri-borough CCGs to commission SNRS even more urgent as patient care will be compromised and the opportunity to avoid preventable complications (where specialist neuro-rehabilitation intervention is needed but not available) will be lost.

A separate paper has been shared with CCGs to request commencement of a pre-procurement provider engagement exercise as soon as possible in May 2015, to secure an interim service.

The business case sets out the need for CCGs to commission a new SNRS with additional capacity to meet recognised demand across the 3 Inner North West London CCGs (Hammersmith & Fulham CCG, Central London CCG, and West London CCG). The quantified minimum capacity resource needed to establish a model of care to meet current demand is equivalent to 19 SNRS Level 2 beds.

Specialist neuro-rehabilitation is a Level 2 specialist provision for people with moderate to severe physical, cognitive and/or behavioural needs, requiring complex disability management. The service is co-ordinated by a multi-disciplinary team of staff with specialist training and experience, and led by a Consultant with specialist accreditation in Rehabilitation Medicine (RM).

The level of service is defined nationally by the British Society of Rehabilitation Medicine (BSRM), and includes admission criteria, adherence to minimum staffing levels, skill mix, reporting and benchmarking requirements (see Table 2).

The key outcomes for patients and the system impact of commissioning this additional capacity include:

- Improving patient experience by reducing unwarranted delayed transfers in care;
- Improved longer term outcomes for patients due to timely and effective interventions to support recovery from injury; regain function/new skills and reductions in complications;
- Reducing long-term (continuing care) costs due to a measurable reduction in the person’s long-term care dependency;
- Reduce hospital trim-point costs associated with increased delayed transfers of care and length of stay.

The need for this additional capacity has been determined through extensive sector work involving patients, carers, clinicians, practitioners and managers across Acute Hospital Trusts, Clinical Commissioning Groups, Community Health Care providers, Adult Social Care, Third Sector, Patients and Carers groups and representatives.

The following four options were examined in the business case are:

1. Do nothing and maintain the status quo;
2. Commission 19 additional SNRS beds resource to provide both a bedded and non-bedded/ Community Outreach model of care within the Tri-Borough CCGs areas;
3. Commission 19 additional SNRS beds within the Tri-Borough area plus the 10 beds currently at the Albany Rehabilitation Unit;
4. Undertake a whole service redesign of the full care pathway.
This business case recommends option 2 – to commission additional capacity equivalent to 19 SNRS Level 2 beds resource to meet the current and future demand requirements. The service model for option 2 will provide a more flexible model of care to meet the varying needs for specialist neuro-rehabilitation for either bedded or community based interventions. For example, where the need for beds is reduced, the incumbent service provider will transfer staffing resources into the outreach element of the service to support more patients in the community.

Commissioners will be engaging with the market on the best contractual mechanism for achieving this – including the options of minimum guarantee beds, variable spot purchase beds etc. during the pre-procurement process.

This recommendation is in line with the current sector work across North West London economy coordinated by Imperial Health Care Partners.

The business case and procurement advice also strongly recommends that the service is commissioned to be located closer home to patients (within the Tri-Borough) area to:

- Ensure strategic fit and alignment with the CCGs strategic plans and the national direction in the NHS ‘5 Year Forward View’ to provide care closer home to patients and far greater control for individuals who need care. [http://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf];
- Enable the service to be included in CCGs estate development plans under Shaping Healthier Future (SaHF) - to create integrated hubs of care;
- Improve integration work with acute care pathways especially for Stroke, Major Trauma and Neurosurgery;
- Enable repatriation of patients back into the tri-borough boundaries;
- Improve integration with local primary, community health and social care teams;
- Support the development of specialist resource locally to enhance expertise, education and training in neuro-rehabilitation;
- Support long-term care services at home and the development of specialist nursing placements.

The feasibility of locating the service within Tri-Borough will be a key part of the procurement process.

The annual full year (2016/2017) investment required for the SNRS provision is £3.591m for the 3 CCGs.

There is also very strong clinical evidence that commissioning a SNRS provides both clinical and economic benefits and quantifiable savings to the economy by reducing DTOC for neuro-rehabilitation, reducing patient dependency and the associated long-term care cost.

For 2016/17 there will be an estimated benefit of £2.945m, £5.521m in 2017/18 and £8.097m in 2018/19. This is due to the cumulative effect of savings in long-term care costs and savings in DTOC. This is explained in detail in the economic case for changes (see 2.2).
The principal risks identified as both probable and high impact are:

- Decision to approve business case is rejected or delayed and a service is not in place for 2015/16 winter period;
- A reduction in DTOC may not deliver the projected cashable savings;
- Premises for an additional 19 beds may not be available within the Tri-Borough;
- Recruitment of qualified staff / retention of staff;
- Providers are not willing / able to take on the service.

Mitigation plans to remove, reduce and manage these risks are set out on table 3.

This business case will be submitted for approval to all the Tri-Borough CCGs governance bodies. Subject to the approval the business case by relevant bodies, the next key steps of the process - the development of a service specification; engagement with stakeholders and procurement, will begin.

The aim is to **commence the new service in 1st April 2016**.

**What will be different for patients in Tri-Borough CCGs?**

Having a new service will mean patients requiring specialist neuro-rehabilitation will:

- Timely access to high quality specialist neuro-rehabilitation;
- Avoid preventable complications associated with delays;
- Enable people to take more control following due to a measurable reduction in their dependency;
- Better experience of care for patients and their relatives closer to home.

A Frequently Asked Questions (FAQs) has also been attached with the business case.

1. **Introduction**

This business case outlines the current state for neuro-rehabilitation services across the Tri-Borough, the current gaps in provision and makes the case for change based on the expected benefits to patient and their families, the service provider community and the system as a whole.

Subject to the approval of this business case, commissioners will move forward with the proposal and will engage with stakeholders to commission additional capacity.

The Better Care Fund (BCF) is a national policy directive that seeks to create a pooled, multi-year fund to catalyse investment into integrated services across health and social care. It encourages cooperation between CCGs and Local Authorities to develop plans to effectively improve services in their area. The amount that is paid to each locality is based on the delivery of results around KPIs, including:

- Delayed Transfer of Care (DTOC);
- Emergency admissions;
- Effectiveness of reablement;
- Admissions to residential and nursing care;
- Patient and service-user experience.

DTOC refers to the excess time taken between the end of a patient’s acute treatment and their transfer to the appropriate non-acute care setting.
Not only might a delay in transfer negatively affect the patient and family experience and potentially delay care, it also incurs extra costs and is a strain on acute service resource. As a result, DTOC is an integral part of the BCF KPIs.

1.1 Strategic Context
This proposal was developed in the context of the BCF and the strategic plans of the CCGs and Local Authorities.

The BCF plan is part of a radical overhaul to the way in which health and social care services are delivered in the Tri-Borough and throughout North West London. The core change programmes that are alongside the BCF include:

- Out of Hospital Strategies;
- Adult Social Care Transformation;
- Whole Systems Integrated Care (WSIC);
- Primary Care Transformation;
- Mental Health Programme.

There is a strong alignment between the vision of all six programmes and all focus on strengthening out of hospital care through bringing care closer to home. The overall objective is to work as a single team across health, adult social care, public health, housing, mental health, primary care, community care, hospital care and other allied services.

A summary of the various projects can be found in Appendix 1.

At both the local and national level, there is a push towards ensuring individuals are treated in the most appropriate setting, ensuring NHS efficiencies and improving outcomes, experience and satisfaction for patients. This vision is embodied in the NHS ‘5 Year Forward View’ Strategy.

This is especially the case in the reduction of DTOC and the need to provide appropriate facilities and environments for rehabilitation and recovery closer home.

1.2 Population Need
Neuro-rehabilitation refers to the branch of care that deals with the intervention and treatment of a wide range of diseases and trauma that affect the brain and nervous system. This includes, for example, treatment and rehabilitation for patients who have suffered a stroke, who have Parkinson’s disease or other types of brain injury.

In 2012/13, nationally 1.3 million patients were admitted to NHS acute treatment facilities due to neurological problems, representing a 500,000 increase in a five-year period (2007/8 and 2011/12), and equating to a 50% increase in the rate of neurological hospital admissions where a neurological condition was mentioned in diagnosis’. In parallel there has been a 200% increase in spend for neurological treatments over the last decade in England.

The current prevalence data on Long-term neurological conditions below shows a total prevalence total of 8723 patients with the most common long-term neurological conditions – excluding stroke.

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4 See background papers section
5 See background papers section
The data in table 1 below, indicates there will be an impact of these neurological conditions on long-term care problems. Commissioning plans need to be able to support this group across the Tri-Borough.

Table 1: Prevalence Data on Long-Term Neurological Conditions

<table>
<thead>
<tr>
<th>Tri-Borough CCGs</th>
<th>West London</th>
<th>Central London</th>
<th>Hammersmith &amp; Fulham</th>
<th>Total</th>
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<tr>
<td>Population</td>
<td>222,315</td>
<td>189,584</td>
<td>187,314</td>
<td>599,213</td>
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<td>TBI prevalence - 1200 per 100,000 with long-term needs</td>
<td>2668</td>
<td>2275</td>
<td>2248</td>
<td>7191</td>
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<tr>
<td>Spinal cord injury prevalence - 50 per 100,000</td>
<td>111</td>
<td>95</td>
<td>94</td>
<td>300</td>
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<tr>
<td>Cerebral Palsy prevalence - 144 per 100,000</td>
<td>320</td>
<td>273</td>
<td>270</td>
<td>863</td>
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<tr>
<td>Huntington’s disease prevalence - 13.5 per 100,000</td>
<td>30</td>
<td>26</td>
<td>25</td>
<td>81</td>
</tr>
<tr>
<td>Motor Neurone Disease prevalence - 7 per 100,000</td>
<td>16</td>
<td>13</td>
<td>13</td>
<td>42</td>
</tr>
<tr>
<td>Parkinson’s Disease prevalence - 200 per 100,000</td>
<td>38</td>
<td>32</td>
<td>32</td>
<td>102</td>
</tr>
<tr>
<td>Spina bifida &amp; hydrocephalus prevalence - 24 per 100,000</td>
<td>53</td>
<td>46</td>
<td>45</td>
<td>144</td>
</tr>
<tr>
<td>Stroke Prevalence(men) 240 per 100,000</td>
<td>5,336</td>
<td>4,550</td>
<td>4,496</td>
<td>14,382</td>
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<tr>
<td>Stroke Prevalence (women) 220 per 100,000</td>
<td>4,891</td>
<td>4,171</td>
<td>4,121</td>
<td>13,183</td>
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Public Health Observatory (PHO) [http://www.apho.org.uk/diseaseprevalencemodels](http://www.apho.org.uk/diseaseprevalencemodels)

For those who require rehabilitation, there are three nationally defined levels of rehabilitation based on the extent of physical, cognitive and/or behavioural, social and medical support needed. Three levels of on-going care are defined as indicated in Table 2 below.

The below table shows how patient’s needs are categorised and met by an appropriate level of service which is proportionate to the person’s assessed needs.

The lower the tiers of care, the more expensive the service, and the higher the complexity of patient needs it meets. For example, patient’s with category A needs, received very high and costly tertiary care services commissioned in low volume by NHS England.

Although it is possible for a higher level of care to be used to address the needs of a patient requiring a lower level of rehabilitation, this will be an inefficient use of resources and reduces access to very costly tertiary provision. Therefore a ‘stepped care’ approach should always be used wherever possible.
Table 2: Categories of Needs and Levels of service for neuro rehabilitation

<table>
<thead>
<tr>
<th>Tiers of Care</th>
<th>Category of patient needs</th>
<th>Level and Type of Service</th>
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<tr>
<td><strong>Level 1</strong></td>
<td>Category A needs</td>
<td>Tertiary ‘Specialised’ Rehabilitation Services</td>
</tr>
<tr>
<td>Commissioned by NHS England (Specialised commissioning portfolio)</td>
<td>Severe physical, cognitive, communicative disabilities or challenging behaviours. Highly complex rehabilitation needs. Require intensive, co-ordinated interdisciplinary intervention from 4 or more therapy disciplines.</td>
<td>Provided by specialised rehab teams led by consultants trained and accredited in the specialty of rehabilitation medicine (RM) (and/or neuropsychiatry). Longer programmes - typically 2-4 months or more, but occasionally up to 12 months.</td>
</tr>
<tr>
<td><strong>Level 2</strong></td>
<td>Patients with category B needs</td>
<td>Specialist rehabilitation services</td>
</tr>
<tr>
<td>Commissioned by CCGs as part of their specialist service provisions</td>
<td>Moderate to severe physical, cognitive, communicative disabilities or challenging behaviours. Require rehabilitation from specialist staff providing coordinated interdisciplinary intervention from 2 or more therapy disciplines. Use of special facilities &amp; equipment.</td>
<td>Provided by inter-disciplinary teams led/supported by a consultant in RM. Medium-Longer durations of stay, i.e. usually 8-12 weeks depending on patient complexity. Occasionally, and usually in extreme situations stays up to 6 months.</td>
</tr>
<tr>
<td><strong>Level 3</strong></td>
<td>Category C and D needs</td>
<td>Local intermediate care and rehabilitation services.</td>
</tr>
<tr>
<td>Commissioned by CCGs as part of generic intermediate provisions</td>
<td>Generic rehabilitation to restore function and maintain independence for people with a wide range of needs and conditions but medically stable. Provision often led by therapy staff, provided in the context of intermediate care in community facilities or at home.</td>
<td>Includes generic rehabilitation units and non-bed based intermediate care services for a wide range of conditions, provided in the community to maintain and support independence and reduce admissions.</td>
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1.3 Current Situation

Within the tri-borough, there are facilities in place that serve the rehabilitation needs of patients with neurologically disease.

Overall there are adequate community based Level 3 provision across the tri-borough CCGs areas providing both bed based and non-bed based services to support people with categories C and D rehabilitations needs – described in the table 2 above.

There is also a programme of work through the BCF to strengthen and further integrate these intermediate care services such as the development of the New Community Independence Service (CIS). These services will need to have a strong relationship and interdependency with the SNRS Level 2.

Currently, there only 10 SNRS beds at Level 2 commissioned by West London and Central London CCGs at the Albany Rehabilitation Unit (ARU), The National Hospital for Neurology and Neurosurgery, Queen Square. There are no dedicated beds commissioned by H&F CCG.

The 2013/14 activity usage for ARU indicates 14% by H&F CCG, 38% by West London CCG and 48% by Central London CCG.

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6 See background papers section
This strain on Level 2 provision results in DTOC between acute hospitals and rehabilitation facilities, as well as reducing the system’s ability to maintain flow from Level 1 tertiary units for those who need to step down but who may not be ready to go home or directly into a level 3 services.

By patients remaining in the acute hospital, the CCG incurs additional charges for bed usage, vital space in acute facilities is not made available for other patients who need it, and patients requiring neuro-rehabilitation may experience delays in their on-going care.

There is an additional risk to the economy in securing essential SNRS, in that the current commissioned provider for the 10 SNRS Level 2 (UCLH) has recently served notice on the Albany Unit’s 10 neuro-rehabilitation beds. This is in order to utilise the space for other care facilities for developing more Theatre space to meet growing national demand.

The current plan is for the 10 neuro-rehabilitation beds to be rehoused at St Pancras Hospital in Camden, 1 mile north of the current location, and by the end of September 2015.

A separate options appraisal is currently being reviewed for the future provision of these beds.

This makes the current situation for Tri-Borough CCGs to commission SNRS Level 2 even more urgent as patient care will be compromised and the opportunity to avoid preventable complications (if specialist neuro-rehab was available) will be lost.

1.4 Calculating beds required from DTOCS - size of the problem
The numbers of patients waiting for neuro-rehabilitation and bed days delayed are coded primarily under Category C codes i.e. awaiting further NHS care of the National DTOC.

Therefore the number of beds needed for meeting the current demand was calculated by extrapolating neuro-rehab delays from the Category C DTOC data for both 2013/14 and 2014/15 (April 2014 -February 2015) using accurate and consistent data set from Imperial College HealthCare Trust (ICHT) – the highest referring hospital for neuro-rehabilitation services.

The full year 2013/14 ICHT - data based on actuals, and 2013/14 category C data from Chelsea & Westminster Hospital (C&W) enabled us to establish three key methodologies which have been applied consistently for the 2014/15 calculations, namely:

- The total patients waiting for neuro-rehabilitation for ICHT (81 patients) represented 40% of the total number of patients in category C delays (202 patients);
- When applied to the total patients in category C for C&W (70 patients), this assumed the total patients waiting for neuro-rehabilitation in C&W to be 28 patients;
- The % split relationship between the numbers of patients waiting for neuro-rehabilitation in ICHT (81) and C&W (28) was approximately 65% and 35% respectively.

Further explanation of the methodology is in Appendix 3.

Based on the above methodology, the analysis of the data indicates there were approximately 109 patients in total waiting for neuro-rehabilitation in 2013/14 (28 from C&W and 81 from ICHT). The total delay days lost for the patient cohort was 2,071, an average of 19 delayed days per patient.

The current data set for 2014/15 (April – February 2015) indicates that there will be a total of 103 patients (77 from ICHT and 26 from C&W).
If a local SNRS level 2 was available, a total of 19 additional beds would have been needed to meet their needs, based on an average length of stay (LOS) of 8 weeks and a minimum bed occupancy rate of at least 85%. This is depicted in Figure 1 below.

**Figure 1- Calculation for number of neuro rehabilitation beds necessary**

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Calculation:
- ((Total neuro rehab DTOC’s * LOS)/ Target Occupancy)/365
- ((103*56) / 85%) / 365
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The LOS represents the best in class performance for Level 2 services – depending on patient complexity. It was also the 2013/14 performance of both Albany Rehab Unit (UCLH) and the Alderbourne Unit (Hillingdon Hospital). Both provide SNRS level 2 in the North West London sector.

Despite efforts to spot purchase additional capacity wherever possible, the current lack of capacity results in delays transfers of care (DTOC) for people waiting for further specialist neuro-rehabilitation remains a key day to day issue for the system.

As further described in the Appendix 2, the two-year average ICHT 13-14 and 14-15 DTOC data indicates that an average DTOC is approximately 12 days per patient. Using this DTOC average meant that, based on activity data for the 2014-2015 period, there were a total of 1312 bed days lost due to DTOC for a total of 103 patients, at an average cost of £282 per day. This brought the yearly (2014/15) expense due to DTOC for Level 2 neuro-rehabilitation to £369,669.

1.5 Clinical Feedback
In order to ensure that the business case incorporated clinical input and that recommendations were validated, a draft business case was sent to clinicians of level 1 and 2 providers, NHS England Commissioners and GP Clinical Commissioners.

Feedback was received from:
- Imperial College Healthcare Trust (ICHT);
- Central London Community Healthcare (CLCH);
- Alderbourne Unit Hillingdon Hospital;
- Albany Unit, University College London Hospitals;
- Royal Hospital for Neuro-disability, Putney;
- Blackheath Brain Injury Hospital;
- Dr. Alan J Hakim - Consultant Physician and Rheumatologist, Barts Health NHS Trust, London Secondary Care Member, CWHHE Clinical Commissioning Group Collaborative, London;
- Dr. Neville Pursell - Paddington Green Health Centre;
- Imperial Health Care Partners (ICHP);
As well as the capacity data presented above, the clinical feedback from the above stakeholders has backed up the need for the 19 additional SNRS Level 2 beds and confirmed the gap in current provision. Overall the feedback suggests there is a need to increase the level of provision across the care pathway – particularly those with cognitive and communications needs.

The summary of the clinical feedback received are:
- Confirmation of the capacity gap for level 2 neuro-rehabilitation beds;
- Need for the additional capacity to support high dependency nursing/medical needs;
- Need for additional local capacity to support complex disability management and tracheostomy care for a whole range of neurological conditions – Traumatic Brain Injury, Stroke, Multiple Sclerosis, Motor Neurone Disease etc;
- Cognitive, communicative and behavioral needs (including challenging behaviors);
- Maintenance and supportive rehabilitation for both traumatic and medical spinal injury which do not require tertiary care units.

There was also further feedback which suggested the opportunity for the model of care to be more innovative to include outreach from the level 2 unit to support:
- Community rehabilitation teams;
- Long-term support services with specialist input - within the defined catchment area;
- Carers prefer facilities to be as close to home as possible;
- Vocational and occupational rehabilitation services;
- Sector wide work on piloting neuro-navigators to support manages the rehab flow.

The engagement work with the provider market during the procurement will enable us to inform ourselves of the balance between beds and community based outreach support.

1.6 Carers / Patients and Third Sector Feedback
The views of both cares and patients were important in the development of this business case. Commissioners have gathered feedback from users and carers during the neuro-rehabilitation co-production workshop coordinated by ICHP.

The workshop brought together patients, carers, third sector and health and social care professionals to examine what worked well and areas for improvement across the neuro-rehabilitation pathway transition points – acute care to neuro-rehabilitation unit; neuro-rehabilitation units to community/home; and living with disability long-term.

Overall, the workshop was highly supportive of the business case to develop more capacity in level 2, and also recommended the need for a Neuro-navigator as a focal point of contact for a patient and their families throughout their journey, and to act as an advocate for these individuals, ensuring that their voices are heard and reflected in multidisciplinary team meetings.

The key messages from the co-production workshop feedback were:
- Managing & reducing delays in accessing specialist neuro-rehabilitation beds;
- Lack of information flow and better communication through the care and transition between services;
- Patients benefitted from the input of specialist rehabilitation in providing them with life-changing skills;
- Lack of step down care from tertiary care to enable discharge planning closer home;
- Lack of specialist support in the community such as vocational rehabilitation and specialist placements locally;
• Lack of coordinated support in long-term care between health and social care leaving people feeling isolated;
• Greater consistence of local provision.

The feedback session further supported the need to address the capacity gap for SNRS Level 2 within the care pathway.

2. The Clinical and Economic Case for Change

Both the clinical and economic case for change is predicated on what is now very strong research-based evidence\(^7\) that that effective specialist neuro-rehabilitation for people with traumatic brain, spinal injury and stroke reduces:

• Length of stay in hospital;
• Longer-term dependency, and
• Longer-term (continuing care) costs.

The evidence also indicates that the earlier the transfer - to specialist centres for more intense rehabilitation programme, the more cost-effective, particularly in the group of people who have high dependency and high care costs needs due to very severe brain injury.

The impact on improved outcomes also needs to be sustained through continued coordinated interdisciplinary rehabilitation in the community; therefore the service will need to have both a bed based and non-bed base model of care to support smoother transitions in care.

This is essentially the basis for making the case for change to commission additional specialist neuro-rehabilitation services.

2.1 The Clinical Case for Change

2.1.1. Inpatient SNRS improves long-term clinical outcomes and reduces cost

To support the case change, the business case examined 3 authoritative clinical studies as evidence of the clinical and economic case for commissioning additional neuro-rehab capacity.

The studies indicate that specialist inpatient neuro-rehabilitation is not only clinically effective in evidencing improvement in long-term care outcome measures, but also cost effective in reducing continuing care costs at the point of discharge.

**Study 1: Specialist in-patient neuro-rehabilitation reduces long-term dependency costs**

This is a retrospective study in 2005 undertaken by Professor L Turner Stokes at the Regional Rehabilitation Unit at Northwick Park Hospital Harrow using 3 year data.

**Objective**


\(^7\) The National Service Framework for Long-term Conditions, Department of Health March 2005
This study examines the efficiency of specialist neuro-rehabilitation in reducing dependency and costs of continuing care for adults with complex acquired brain injuries for 297 patients with a range of moderate to severe neurological needs.

**Method**
Retrospective analysis of the following collected data:

- Assessing dependency scores on admission and categorising into low, medium and high;
- Dependency scores and cost of care on admission;
- Dependency scores and cost of care on discharge;
- Difference in cost of care at admission and discharge – represented savings per week;
- Calculating average length of stay and cost rehabilitation per patient;
- Time taken to offset cost of rehabilitation.

The dependency scores provided an estimation of care hours and costs, using the recognised Northwick Park Dependency Score (NPDS) dependency tool.

**Results**
The majority of patients showed significant reduction in dependency between admission and discharge on all measures:

- Overall, 232 (78.1%) patients demonstrated a reduction of care needs between admission and discharge;
- 25 (8.4%) remained the same;
- 35 (11.7%) patients actually showed increased care needs as the full extent of their conditions became evident;
- Average Length of Stay – 112 days.

**Reduction in continuing care cost**
The results showed considerable heterogeneity between care dependency level, care hours and costs. The cost of rehabilitation and reductions in longer-term care costs was as follows:

- Greater cost reduction in the high dependency group at £639 per week;
- Medium dependency group was £323/week;
- Low dependency group at £111/week;
- The average cost reduction for high and medium dependency groups was **£481**.

**Conclusion**
The key conclusions reached are:

- The NPDS detected reduction changes in dependency for the majority of patients;
- Reduction in dependency was associated with substantial savings in the cost of on-going care - especially in high dependency patients.

**Reference:** [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2117444/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2117444/)

This average cost reduction of **£481 per person per patient** has been used in calculating the **reduction in long-term cost** as the SNRS to be commissioned will be supporting people with people with medium to high dependency need. The research suggests the majority of patients with Low dependency needs are best managed through the community rehabilitation service pathways.
**Study 2: Reductions in dependency costs as a result from treatment in an inpatient neurological rehabilitation unit for people with stroke**

This study examines a one year observational study aimed at determining the impact of inpatient neuro-rehabilitation on the reductions in care costs for patients under 65 primarily with stroke.

**Objective**  
Identify the impact of specialist neuro-rehabilitations on reductions in cost post discharge.

**Method**  
An observational study involved:  
- A cohort of 35 community-dwelling patients (already receiving services) who were transferred into the inpatient neuro-rehabilitation units from acute medical wards in a large teaching hospital;  
- Physical ability, dependency and potential community care costs were measured on admission and discharge.

**Results**  
The results from the studies showed the following impact:  
- Majority discharged home - 29 patients were discharged home and 6 to nursing homes;  
- After a median of 59 days of rehabilitation;  
- Patients made highly significant gains in physical ability with decreased dependency (median Barthel index 50 to 64).

**Reduction in continuing care cost**  
- Median calculated costs for care were reduced from £1,900 to £1,100 per week;  
- Total annualised care costs reduced from £3,358,056 to £1,807,208;  
- A saving of £868 per week - a potential saving of £1,550,848 per year.

**Conclusion**  
- Savings occurred in those with moderate and severe disability and they have the potential to continue to accrue for over 12 years;  
- Similar results will probably be found for rehabilitation in other forms of acquired brain injury.


**Study 3: Neurological patients have better longer-term outcomes in specialist inpatient neuro-rehabilitation facilities**

**Objective**  
A comparative study of patients with moderate to severe Traumatic Brain Injury (TBI) receiving rehabilitation in specialist neuro-rehabilitation facilities compared with standard rehab facilities on measures of cognitive and physical gains in function, patient reported quality of life, and discharge disposition.

**Method**  
The study analysed a total cohort of 5,364 clinically and demographically matched neurological patients and compared longer term outcomes for those receiving inpatient neuro-rehabilitation and Standard Rehab Facilities.

**Results**
The study showed that for the patient cohort who received inpatient neuro-rehabilitation experienced better long-term outcomes in physical and cognitive function and resulting in:

- Lower mortality rate: 30.8 percent lower (15.5 percentage point difference) all-cause mortality rate over a two-year period;
- 93.2 more days difference in average days alive over a two-year period;
- Fewer emergency attendances: 43.9 fewer emergency room visits per 1,000 patients per year;
- Prolonged stay at home: 95.0 more days residing at home (i.e. not receiving facility-based care) over a two-year period.

**Conclusion**

Specialist inpatient neuro-rehabilitation facilities are shown to benefit from rehabilitation programs on measures of cognitive and physical gains in function, patient reported quality of life, and discharge disposition.

Reference: [https://www.amrpa.org/newsroom/BrainInjurySummary.pdf](https://www.amrpa.org/newsroom/BrainInjurySummary.pdf)

2.2. The Economic Case for Change

There are both cashable and non-cashable benefits from commissioning additional SNRS Level 2 capacity.

In terms of cashable cost reductions, the business case focuses on two main areas of reductions— the reductions in DTOC and the reductions in longer-term (continuing care) care costs to the economy.

**Reductions in DTOC**

The calculated minimum savings on DTOC bed costs by providing a SNRS Level 2 will be £369,669. This is explained in detail in the financial benefits in Appendix 2.

**Reductions in long-term care cost due to reduction in patient dependency.**

Evidence from research Study 1 show that a long-term care cost saving impact following a specialist neuro-rehabilitation intervention is £481 per week per patient—due to the reduction in dependency levels.

Therefore if the service was commissioned for 3 years on the basis of:

- The expected projected 103 patients each year
- Each of the patient surviving during the 3 years

The projected savings for the each year of the contract life will be as follows:

- Year 1: 103 patients cohort = 103 x 156 weeks (52+52+52) x £481 = £7,728,307.
- Year 2: 103 patients cohort = 103 x 104 weeks (52+52) x £481 = £5,152,204
- Year 3: 103 patients cohort = 103 x 52 weeks (52) x £481 = £2,576,102

**Estimated long-term care cost savings over a 3 year contract span will be £15.456m recurrently.**

Bearing in mind that most patients are likely to live more than 3 years, this presents a conservative projection of the economic value of the service on reducing on long-term cost in 3 years life span of the service for the Tri-Borough CCGs economy.
Total expected benefits on long-term care and DTOC
The expected phasing profile of Long-term care cost savings is as proposed in the table below:

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>LTC savings Year 1</td>
<td>103</td>
<td>£2,576,102</td>
<td>£2,576,102</td>
<td>£2,576,102</td>
<td>£7,728,307</td>
</tr>
<tr>
<td>LTC savings Year 2</td>
<td>103</td>
<td>£2,576,102</td>
<td>£2,576,102</td>
<td>£2,576,102</td>
<td>£5,152,204</td>
</tr>
<tr>
<td>LTC saving Year 3</td>
<td>103</td>
<td></td>
<td></td>
<td>£2,576,102</td>
<td>£2,576,102</td>
</tr>
<tr>
<td>Total LTC savings</td>
<td>309</td>
<td>£2,576,102</td>
<td>£5,152,205</td>
<td>£7,728,307</td>
<td>£15,456,613</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DTOC savings per year</th>
<th></th>
<th>£369,669</th>
<th>£369,669</th>
<th>£369,669</th>
<th>£1,109,007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total financial benefit</td>
<td>309</td>
<td>£2,945,771</td>
<td>£5,521,874</td>
<td>£8,097,976</td>
<td>£16,565,621</td>
</tr>
<tr>
<td>CCGs investments per year</td>
<td></td>
<td>£3,591,340</td>
<td>£3,591,340</td>
<td>£3,591,340</td>
<td>£10,774,020</td>
</tr>
<tr>
<td>Net costs(+)/benefits (-)</td>
<td></td>
<td>+£645,568</td>
<td>-£1,930,534</td>
<td>-£4,506,636</td>
<td>-£5,791,601</td>
</tr>
</tbody>
</table>

The summary total reductions in DTOC and long-term care (continuing care) costs are as follows:
- DTOC savings per year = £369,669;
- Long-term care costs savings per year = £2,576,102;
- Total recurrent savings per year = £2,945,771.

Therefore, the potential overall total value of savings for a 3 year contract period will be of £16,565,621 (with £15,456,613 coming from long-term care cost savings).

3. The proposed service
3.1 Proposed outline of outcomes and objectives
In line with the NHS Outcomes Framework and North West London CCGs strategic outcomes, the intended outcomes for patients in the delivery of SNRS Level 2 will be - but not limited to:

- **Outcome 1**: Secure high quality service for patients by ensuring patient receive safe and effective care to prevent or minimise secondary complications as a result of a disabling illness or injury;
- **Outcome 2**: Reduce the inequality gap in the neuro-rehabilitation care pathway by providing timely specialist neuro-rehabilitation for people who need it;
- **Outcome 3**: Improve patient experience of care by reducing unwarranted delays in transfers of care for people requiring specialist neuro-rehabilitation;
- **Outcome 4**: Enable people to take more control of their health and wellbeing following a disabling condition/injury by providing rehabilitation to re-learning new skills to functions and helping the person to adapt/adjust to their losses.

The key objectives for the incumbent provider delivering the service will be (but not limited to) the following:

- Provide a Consultant (in Rehabilitation Medicine) Led service to support the physical, cognitive and behavioural effects of people with moderate to severe needs;
- Recruit and maintain a well-resourced and competent multidisciplinary team;
- Provide timely and effective assessment and treatment service for people needing specialist neuro-rehabilitation in order to prevent and manage complications;
- Provide a measurable reduction in dependency and improve longer term costs for patients;
- Reduce length of stay in Level 1 units by providing a step-down support as part of a graded discharge back to community settings – where the person cannot be transferred directly into a Level 3 provision locally;
- Provide specialist Outreach Support into community rehab teams and longer term care settings to sustain care and prevent avoidable admissions;
- To provide expert and specialist advise, assessment resource and educational/training role for local services and professionals in the field of neuro-rehabilitation across Tri-Borough.

3.2. Proposed service model and interventions

One of the key areas of debate in rehabilitation is the balance between bed-based and non-bed based model of care and requirements. The evidence suggests that both inpatient and community based rehabilitation should be provided as part of a continuum of support for those who need it.

The proposed approach to the service delivery model is illustrated in the National Clinical Guidelines for Rehabilitation following Acquired Brain Injury (ABI) – indicating a phased approach to rehabilitation that is proportionate to need as depicted in figure 1 below.

![Figure 1: Phases of rehabilitation and intended outcome - Turner – Strokes L 2003: Rehabilitation following acquired brain injury: National Clinical Guidelines London: RCP, BSRM, 2003](image)

**Specialist Neuro-Rehabilitation Service (SNRS) level 2 phase**

Neurological complications associated with lack of specialist neuro-rehab can develop very quickly. Therefore early transfer for specialist neuro-rehabilitation intervention is essential - to prevent and manage avoidable complications. The focus of SNRS is primarily on:

- **Medical stability**, and comprehensive multidisciplinary assessment to provide a measurable baseline of functions; level of dependency and care requirements (hours and cost);
- **Disability management** to **reducing and preventing secondary complications** (pathology), such as contractures, malnutrition, pressure sores, pneumonia etc.;
- Providing the required **intensive rehabilitation needed to reduce impairment** such regaining mobility, improving activity (reducing disability) and safety as much as possible;
- **Supporting patients to learn new skills** (including maximising the use of assistive technology, equipment etc) and make both physical and psychology adjustment needed to manage their Activity of Daily Living (ADL) tasks;
- **Supporting successful transition** back into community based provision.
Inpatient SNRS clinical interventions

Examples of the specialist rehabilitation and complex disability management interventions which will necessitate bed based care - to be provided in an appropriate location will be (but not limited to):

- Optimising medical condition for rehabilitation – including blood tests and investigations;
- Optimising respiratory and tracheostomy management whilst going through rehabilitation;
- Managing swallowing impairment and risk of aspiration;
- Maintaining adequate nutrition and hydration in the face;
- Physical and occupation therapy to maintain muscle tone/reduce muscle wasting, maintain balance, transfer skills etc.;
- 24-hour positioning/handling to avoid development of contractures and pressure sores;
- Effective bladder and bowel management;
- Establishing basic communication;
- Management of seizures and other absences;
- Provide specialist cognitive rehabilitation for patients;
- Managing challenging behaviours (as needed), psychological and emotional support;
- Provision of information, counselling and support for person and relatives.

The nature and severity (or combinations) of these will determine whether or not this will require inpatient rehabilitation.

According to a Level 2 Consultant in Rehab Medicine, the clinical benefits for a SNRS being situated on a hospital site relate to the ability to commence rehabilitation early – even where the patient still requires ongoing medical management and interventions. This includes:

- Providing adequate Consultant level medical cover over weekends for the unit;
- Unit being able to complete ongoing medical investigations and scans (MRI, CT etc);
- Manage exacerbations and treating hospital acquired infection such as sepsis;
- Managing acute complications such as seizures - rather than resort to acute admission;
- Carry out tracheostomy management and successful de-cannulation whilst undergoing rehabilitation at the same time.

Specialist Neuro-Rehab Outreach Service (SNROS) interventions

People not requiring inpatient care should be transferred as soon as possible and practical. One of the biggest barriers to making effective use of specialist rehabilitation beds is the lack of specialist support in managing the transitions to the next phase of community based care.

For some patients, there will be a need to continue the level of specialist neuro-rehabilitation input to sustain gains made in inpatient care until community teams have the capacity and capability to support the person to continue to maximise their ability to function safely in their community based environment.

The focus of the Specialist Neuro-Rehab Outreach Service (SNROS) will be to provide specialist neuro-rehabilitation to those patients needing this outside Tertiary, Acute, and Level 2 beds. This will ensure:

- Timely discharge from inpatient beds in Tertiary, Level 2 and Acute care settings;
- Ensure successful transition back into community services;
- Provide access to specialist neuro-rehabilitation interventions to sustain gains made in inpatient unit;
- Provide specialist input into community based services - such as the Community Independence Service (CIS) and Community Rehab Teams (CRTs) and other long-term care settings e.g specialist nursing placements, with specialist neuro-rehab input;
• Prevent avoidable admissions into inpatient SRNS from long-term care settings by providing specialist input into those settings.

Service Interdependencies with community teams
Patients progress through the different stages of their rehabilitation at very different rates. For example the majority of people with low dependency specialist neuro-rehabilitation needs do not require inpatient bed at all and should be able to pass straight on to services in the community.

The specialist outreach service will work closely with CIS and CRTs and support both the patient and staff with specialist neuro-rehabilitation input as needed in the following areas, for example:

• Outpatients medical and therapy reviews;
• Providing specialist assessment and care planning support to manage cases;
• Support in providing interventions to enhance participation in personal care tasks;
• Improvement in quality of life by supporting social integration and management of other activities of daily living (ADL) tasks;
• Providing psychological adjustment and managing carer stress etc.
• Vocational rehabilitation activities with the emphasis on making meaningful use of occupational time to retain gains made;
• Provide specialist education on neuro-rehabilitation to the person and staff in their care setting.

The service will also build strong working relationships with:

• GPs and Primary Care services;
• Adult Social Care services;
• Independent Care sector organisations;
• Third Sector organisations in identifying the most appropriate community based care setting for supporting individuals and their carers.

There will need to be an agreed process and clear protocols on service hand offs, joint assessment and intervention, etc.

4 Market ‘warming’ and engagement

As part of the pre- procurement market engagement work we will be working with the provider community, commissioners and clinicians, GPs and other stakeholders to further shape the service model and the functions of the outreach service.

This will enable commissioners to test out, shape and ‘fine-tune’ the service model with the market. It will also inform commissioners of:

• There are any key barriers and any issues with delivering the model of care and what needs to be done to address them;
• The Market understands the commissioner’s needs and is ready to respond through the procurement process – f this is determined to be the way forward;
• How the service interdependencies need to operate in the finalised service specification
• Potential pricing approach;
• Procurement timescale and whether service commencement timescale is realistic.

The market ‘warming’ and engagement will provide us with a formal way of providing prior information notice to the market, invite expressions of interest, requesting information on commissioning approach and inviting providers to any planned engagement sessions.
The additional information gained from the market engagement process will lead to a better informed Business Case and Commissioning for the service.

4.1 Memorandum of Information (MOI)
One of the most effective and efficient way of engaging the market is by providing a Memorandum of Information (MOI) to tell the story around the:

- Commissioning intention for the service – background, work to date etc.
- Sharing a draft outline of the service specification – population need for the service; how this has been quantified; demand/capacity assumptions/trends etc.
- Approach to assuring quality / performance / incentives - whether CQUIN likely to apply
- Contract/tariff payment approach – block, minimum guarantee etc.
- Sharing Financial Model Template;
- Providing information as to whether TUPE from incumbent provider(s) will apply;
- Mandated location of services e.g. Tri-Borough and/or premises – details of location, size, facilities etc.

The MOI will also include:

- An outline of the procurement timetable and proposed service commence date;
- A questionnaire to seek feedback and information on aspects of the service and how it will work;
- Mobilisation plan and agreeing interim arrangements to ensure there are no gaps in service from September 2015 – until new service commences on 1st April 2016.

5 Options Appraisal
To establish the best available route to deliver a greater provision of neuro-rehabilitation, better manage DTOC, and consider the contractual mechanisms 4 options were assessed. These are shown in Table 2.

<table>
<thead>
<tr>
<th>Option</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maintain current position</td>
<td>• No additional investment through procurement necessary</td>
<td>• Inequality gap in service not addressed</td>
</tr>
<tr>
<td></td>
<td>• No additional training or service redesign</td>
<td>• Patient access to high quality care is compromised and risks to patients high as service will no longer exist</td>
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<tr>
<td></td>
<td></td>
<td>• DTOC levels predicted to rise with rising demand</td>
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<td></td>
<td></td>
<td>• Opportunity to impact/reduce long-term care dependency is lost</td>
</tr>
<tr>
<td>2. Full Procurement of a SNRS 19 beds resource</td>
<td>• Addresses inequality gap and shortfall in care pathway</td>
<td>• Large investment</td>
</tr>
<tr>
<td></td>
<td>• Decrease in category C DTOC</td>
<td>• Tight procurement timelines</td>
</tr>
<tr>
<td></td>
<td>• Opportunity to reduce dependency and substantial savings in long-term (continuing ) care costs</td>
<td>• Savings are not easily cashable due to their impact on long-term care costs</td>
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<tr>
<td></td>
<td>• Opportunity to build a specialist resource an effective service model within Tri-Borough</td>
<td></td>
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<tr>
<td></td>
<td>• Contractual savings could be</td>
<td></td>
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</tbody>
</table>
achieved through procurement

<table>
<thead>
<tr>
<th>3. Full Procurement of a SNRS 19 beds resource plus the 10 beds at the Albany Unit</th>
<th>• As per 2 above, plus undertake one commissioning process to include the re-provision of the 10 Albany beds</th>
<th>• As per 2 above • Might not be needed as the impact of option 2 will not be evaluated.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Full Service Redesign</td>
<td>• Identification of re-provision options • Improve assessment processes • Ensures smoother pathway to focus on integrated working and transition to care in community</td>
<td>• Lengthened timeframes will increase DTOC, present increased risks to patients • Substantial investment without visibility of impact • Currently being reviewed by Imperial Healthcare Partners (IHCP) - work will be duplicated</td>
</tr>
</tbody>
</table>

Table 2- Options Appraisal

**Option 1- Maintain current position**
This option would continue the service as-is with no change to either procedures or number of beds. While this option would remove the need for any investment, DTOC prevalence would continue either at the current rate or at an increased rate as demand rises in the future. The current appropriation of patients to inappropriate rehabilitation services would also continue, accompanying a decline in user satisfaction.

**Option 2- Full procurement of 19 beds**
This option addresses the current Tri-Borough shortage in Level 2 neuro-rehabilitation facilities. This option involves the acquisition of all 19 beds (As per Figure 1 above) at one time from the April 2016 launch date, along with the necessary acquisition of resources and personnel. The reductions in DTOC and unnecessary acute hospital bed days and reduction in long-term care dependency and costs drive an increase in benefits, while also increasing patient and carer satisfaction.

Procuring this initial service will enable the system to evaluate the impact of commissioning a new model of care and additional capacity (than previously existed), before considering further investment in additional beds.

It is proposed the contract is of three years duration during which time, and over the first two years the model of care and the interface with community services will be explored with the provider. At the end of the second year it is proposed that the model is reviewed in light of learning with the opportunity for service development accordingly having taken the review through the appropriate commissioning process. The aim by the end of the third year would be to have evolved an integrated model of care negating the need to engage in a full scale service redesign (Option 4).

The clinical feedback has suggested that some of the resource for the bedded provision (approximately 5 beds) could be used to provide a non-bedded/outreach model of care to support the bedded based provision. This will be worked up further in the service specification.

The ideal location for the service will be discussed as part of the procurement considerations. However, this will be based on the clinical need for the service to be in close proximity to Major Trauma Centre (St. Mary’s Hospital), Neurosurgery and Hyper Acute Stroke Centre (Charing Cross Hospital) in order to access clinical support and support integration with acute care pathways.
It will also need to complement CCGs strategic intentions for the Charing Cross Hospital site - through SAHF program, and the need to develop co-located patient and relative support services for disability management services e.g prosthetic services, community rehabilitation teams and social care teams.

**Option 3 - Full procurement of 19 beds* plus the re-provision of the 10 beds at the Albany Unit**
This option addresses the need to undertake two commissioning processes if it was not viable to use the proposed new site for the current provision at Albany, either due to capacity or cost.

**Option 4 - Full Service Redesign**
This option would involve a full review of intermediate care provision across Tri-Borough as a whole. This includes the investigation of bed usage in rehabilitation and assessment wards to determine if reassignment to neuro-rehabilitation could occur.

The review would include linkages to the CIS, current utilisation, care in the community and service redesign proposals for better integration between health and community/social care. The duration of the review would delay delivery of care that is already in need of provision, as well as negatively impact performance over reduction in DTOC.

Regardless of which option is chosen the expectations of GPs (as the responsible clinicians for the person care whilst in the community) needs to be taken into account. These expectations are as follows:

- The need for acute to inform the GP about the patient’s transfer of care or discharge to a specialist neuro-rehabilitation unit;
- For the specialist unit to inform the GP of progress against set goals through MDT review;
- For GP to be informed and included in discharge planning arrangements back to the community.

5.1 Recommended option
All the options have been considered against strategic fit to CCGs, Local Authorities, and the BCF strategic objectives, the impact on current services offered, and the imperative need to provide high quality care to meet the needs of users.

As mentioned earlier, the presence of DTOC negatively affects the quality of care given to users and presents a strain on NHS services, it also means rehabilitation when accessed takes longer and opportunity to reduce long-term care costs down stream is lost. BCF objectives to improve quality through integration of health and social care reduce delays and wastes in care and costs means this service gap area cannot be ignored.

Additionally, both the clinical and patient/carers feedback has confirmed that this is a gap that impacts on patient care on day to day basis; as a result, maintaining the current status (Option 1) is not seen as a viable and responsible option. In fact it poses a patient risk to care and a reputational risk to CCGs.

Additionally, these DTOC should be reduced as quickly as possible to provide timely care to those currently needing it and also to prevent the reoccurrence of delays in the near future. While a service redesign might occur in the future (current studies are being conducted by Imperial Healthcare Partners (ICHP), the length of time for appropriate analysis, design and implementation would delay these decreases in DTOC. As a result, the strain on resources and reduction in patient care quality will continue until the redesign is launched. In this instance, therefore, it is advised that Option 4 (a complete service redesign) not be chosen.

24
Options 2 and 3 both recommend the procurement of 19 SNRS Level 2 beds. Both options would immediately decrease DTOC, and are thus preferable over Options 1 and 4. In both cases, there is a large initial investment that is necessary.

Option 2 the procurement of 19 SNRS Level 2 beds to enable a more open bid from willing providers to secure vital skilled staff with the certainty of a contract term. Also, the work being conducted through the CIS and by ICHP can be applied to further increase the efficiency and quality of the services offered to users. As a result, our recommendation is to proceed with Option 2.

The clinical feedback received supports this option either as a full implementation or a phased process.

6 Procurement process and timetable – provisional draft

Procurement advice and support has been requested as part of the business case.

A draft single stage procurement timetable has been developed which sets out the activity milestone for each state of the process below.

<table>
<thead>
<tr>
<th>Activity / Milestone</th>
<th>Description</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-procurement market engagement</td>
<td>Publish commissioning intentions, invite expressions of interest from the market, invite feedback on draft service specification, workforce, commercial issues, etc</td>
<td>April/May 2015</td>
</tr>
<tr>
<td>Procurement planning</td>
<td>Preparation for procurement: contracting approach, tariff &amp; payment mechanisms, service specification, TUPE implications, evaluation panel members.</td>
<td>April/May 2015</td>
</tr>
<tr>
<td>CCG authorisation for procurement to proceed</td>
<td>Internal CCGs approval for procurement to proceed.</td>
<td>April/May 2015</td>
</tr>
<tr>
<td>Procurement preparation</td>
<td>Finalisation of all procurement documentation</td>
<td>May 2015</td>
</tr>
<tr>
<td>Issue advert &amp; ITT documentation</td>
<td>Procurement advertised on Contracts Finder and all procurement documents made available to potential Bidders through the E-Procurement portal</td>
<td>Early August 2015</td>
</tr>
<tr>
<td>Bidder Briefing Event</td>
<td>CCG supported by Procurement lead host a Bidder Briefing Event to ensure good understanding by Bidders of the Service requirements and Procurement process</td>
<td>Mid to late August 2015</td>
</tr>
<tr>
<td>Deadline for the receipt of clarification questions from Bidders</td>
<td>Deadline by which Bidders may submit clarifications to the CCGs</td>
<td>1 week before ITT submission deadline (see below)</td>
</tr>
<tr>
<td><strong>ITT Submission DEADLINE</strong></td>
<td>Deadline by when Bidders must have fully completed and submitted their Bids – this presumes 7 weeks <em>(this can be shortened, or lengthened)</em></td>
<td>End of September 2015</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td><strong>ITT Bid evaluation stage</strong></td>
<td>Period when Bids will be evaluated and CCG clarification questions responded to by bidders. Evaluation panel individually review and score bids, followed by moderation event to agreed consensus scores and section of the Preferred Bidder(s)</td>
<td>Early October 2015 (allow 1 or 2 weeks), including Evaluation Panel Moderation meeting immediately toward end of this couple of weeks</td>
</tr>
<tr>
<td><strong>Post procurement outcomes report</strong></td>
<td>Preparation of report detailing the evaluation approach and outcome, with recommendation regarding award of contract</td>
<td>Mid October 2015</td>
</tr>
<tr>
<td><strong>CCG authorisation to award contract(s)</strong></td>
<td>CCG governance to consider post-procurement recommendation report regarding contract award. CCG authorise contract award.</td>
<td>By end of October 2015 – TBC pending meeting dates</td>
</tr>
<tr>
<td><strong>Bidder initial notification and standstill period regarding Confirmation of a Preferred Bidder(s)</strong></td>
<td>The expected dates when Bidders will be notified of the outcome of the evaluation and observance of the recommended Standstill Period</td>
<td>End of October 2015</td>
</tr>
<tr>
<td><strong>Contract signature</strong></td>
<td>The expected date for the signing of the Contracts between the CCGs and the successful Provider</td>
<td>From mid-November 2015</td>
</tr>
<tr>
<td><strong>Service mobilisation period</strong></td>
<td>Period when the Preferred Bidder plans and delivers mobilisation activities to prepare for service commencement</td>
<td>From November 2015 – duration dependent upon mobilisation plan TBA with preferred bidder – assume at least 3 or 4 months</td>
</tr>
<tr>
<td><strong>Full service commencement</strong></td>
<td>Date when commencement of the new Services expected</td>
<td>1st April 2016 possible</td>
</tr>
</tbody>
</table>

The timelines to ensure service commencement are tight and will requires timely decision from CCGs to ensure risks associated with gap in service is minimised.

**7 Wide strategic benefits**

The procurement of the 19 additional SNRS Level 2 beds resource provides wider strategic benefits allows for an improvement in service to users, carers, and clinicians, and aligns with the strategic direction taken by the CCGs. This is especially the case with out of hospital priorities, including SaHF.

Any response to tender will need to be considered in light of planned changes to estate across the borough, including the development of a new health and social care hub at Parson’s Green and the redevelopment of Charing Cross hospital. The 2015/16 commissioning intentions document for each of the three CCGs also supports the provision of additional neuro-rehabilitation beds as part of the Better Care Fund.
7.1. Clinical benefits: in implementing a coherent neuro-rehabilitation pathway
The business case supports the implementation of the current NWL CCGs sector agreed care
pathway for neuro-rehabilitation coordinated by ICHP in Figure 2 below.

The pathway in Figure 2 below shows the patients journey across acute to the community and the
services that need to be in place to deliver the care pathway and the benefits to patients.
This reinforces the clinical case for change in section 2 of the business case.

As part of supporting patient and professionals to navigate the care pathway, funding has been
provided by NHS England to pilot a neuro-navigator role to provide a single point of contact and
support for patients and carers waiting through the service. The neuro-navigator role also supports
professionals with managing referrals – which will be facilitated by the implementation of a web-
based referral management system with partners across North West London.

These will provide managing the current demand and capacity gap in services and helping
professionals make effective of current provision. The commissioning of additional capacity in SNRS
Level 2 is a key step to addressing the gap in the care pathway.

Implementing this care pathway delivers real benefits for individual service users, service providers
and commissioners as described below.

**Individual Service Users**
The main benefit for patients is the assurance of the right level of care in a timely manner by
reducing wait for neuro-rehabilitation beds through timely transfer to appropriate care settings.
This ensures that their length of stay (LOS) in an acute hospital setting is no longer than necessary,
and that they will receive rehabilitation with specialists and equipment essential for their needs.
This is essential in improving long term outcomes, and will also allow for care provision closer to
home in many cases.
**Commissioners**
There are a number of benefits realizable through the implementation of this project. It gives Commissioners the opportunity to effectively respond to the demand for neuro-rehabilitation care, expand / develop local expertise and high quality services, and also reduce excessive bed days and subsequent costs associated with patients waiting in the wrong setting.

**Providers**
The successful provider will also benefit through the provision of 19 new neuro-rehabilitation beds. Given the specialised needs of Level 2 patients, providers will be able to deliver a greater offering of specific equipment and other resources. The full procurement of the additional beds can also serve as a starting point to integrate community care into recovery and in-reach services, a further opportunity for providers to engage with both in service design and delivery.

8 **Financial Model – costs and benefits**
Removed as commercially sensitive

9. **Risks**
While the opportunities, benefits and financials of this project have been carefully analysed, risks still exist that could potentially affect either the timeframe or even the entire success of the project. A comprehensive list of risks, impacts and mitigation strategies is presented as Table 3.
<table>
<thead>
<tr>
<th>Risk #</th>
<th>Risk Description</th>
<th>Impact (out of 5)</th>
<th>Likelihood (out of 5)</th>
<th>Overall risk score (out of 25)</th>
<th>RAG</th>
<th>Mitigation</th>
<th>Impact (out of 5)</th>
<th>Likelihood (out of 5)</th>
<th>Overall mitigation score (out of 25)</th>
<th>RAG</th>
</tr>
</thead>
<tbody>
<tr>
<td>RO 01</td>
<td>Reduction in DTOC will not deliver cashable savings as presented in the financial model</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>Amber</td>
<td>Acceptance of risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RO 02</td>
<td>Premises for additional 19 beds will not be available or found within the procurement timeline. Must be found alongside equipment and trained professionals</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td>Red</td>
<td>To be addressed as part of the provider engagement sessions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RO 03</td>
<td>Go live date impacted by difficulty in recruiting qualified staff/TUPE process. Based on linear ramp up profile of referrals, a later starting day would severely impact benefits and reduce year end DTOC prevention</td>
<td>3</td>
<td>5</td>
<td>15</td>
<td>Red</td>
<td>To be addressed as part of the provider engagement sessions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RO 04</td>
<td>No provider identified who is willing or able to take providing 19 additional beds</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td>Red</td>
<td>To be addressed as part of the provider engagement sessions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Risks and Mitigation
10. Governance and Timescales

This project falls under the governance of the three CCGs of the Tri-Borough. Each CCG will have a Finance and Performance (F&P) committee that will be components of the BCF Partnership Board. This Partnership Board is broken up into different units based on projects, one of which is the Neuro-Bed Working Group.

Full BCF governance. This project only affects the CCGs

This governance is important in the creation of an effective timeline that allows for both a April 2016 launch and critical evaluation by the Tri-Borough governance boards. Following a review of the business case by the Tri-Borough governance boards and finance and performance committees, and with oversight of the SRO steering board, the case should be approved by late May / early June 2015.

After approval, procurement processes should begin, resulting with awarding of contracts at a proposed time of early September 2015. During this phase, the SRO steering board will monitor progress, leading to a go live date in April 2016.

The success and adherence to this timescale is subject to constraints and dependencies.

Constraints
The critical pathway for this time-frame is largely constrained by the procurement portion of the project. With delays in sourcing appropriately trained personnel and facilities, the timeline will be pushed back.
The timely review of proposals by governing bodies is also necessary for the time-frame to succeed.

**Dependencies**
The project timeline is dependent on the approval of the business case by the aforementioned governing boards. Should this approval not be granted, this project will either end or be held until a new business case is created and approved.

### 11. Conclusion and Next Steps

This business case recommends Option 2, the procurement of 19 additional Level 2 neuro-rehabilitation beds that will be available to launch in April 2016. The acquisition has been shown through financial and demand analysis to sufficiently meet the need currently faced by Tri-Borough.

There are significant benefits to **patients and the system** for commissioning this service. For patients, the service will primarily address the inequity gap including:

- **Improving patient experience** by reducing unwarranted delayed transfers in care;
- **Improved longer term outcomes for patients** due to timely and effective interventions to support recovery from injury; regain function/new skills and reductions in complications;
- **Reducing long-term (continuing care)** costs due to a measurable reduction in the person’s long-term care dependency;
- **Reduce hospital trim-point costs** associated with increased delayed transfers of care and length of stay.

Commissioning the service also provides a clear strategic fit and clinical alignment namely:

- **Fit with the NHS '5 Year Forward View';**
- **Enable the service to be included in CCGs estate development plans under Shaping Healthier Future (SaHF) - to create integrated hubs of care;**
- **Improve integration work with acute care pathways** especially for Stroke, Major Trauma and Neurosurgery;
- **Enable repatriation of patients back** into the tri-borough boundaries;
- **Improve integration** with local primary, community health and social care teams;
- **Support the development of specialist resource locally** to enhance expertise, education and training in neuro-rehabilitation;
- **Support long-term care services at home and the development of specialist nursing placements.**

While there will be a significant investment in 2016/17 that the benefits of reduced DTOC and Long-term care savings may not repay, it is believed that this course of action is essential and will be successful in the overall context of the BCF. The increased quality of care afforded to patients through quick, appropriate referrals to the proper rehabilitation ward. The benefits are not only seen by patients, but also by commissioners and providers as detailed above. As such, the merits of the completion of this project will outweigh the financial loss and therefore should be undertaken.

Following agreement of the recommendations, it is timely and right to move onto work with providers on translating the implications into practical and implementable steps.

For the immediate future, findings will be translated into commissioning and contracting intentions for 2016/17. The work over the next 11 months will prepare the ground, to allow providers the time to prepare for change, and commissioners to make translate the investment case into new contract agreements.
### Design and Preparation

**Confirming need for change, consultation and agreeing future provision**

**Objectives**
- Consult with providers
- Agree approach e.g. joint led or single led
- Agree KPI’s
- Extensive stakeholder engagement

**Key Deliverables**
- Agreed business case
- Contractual arrangements agreed
- Implementation Plan

### Go Live

**Implementation phase**

**Objectives**
- Additional 20 neuro beds in place by April 2016
- KPI’s agreed and being measured
- Realise additional benefits

**Key Deliverables**
- Achieve performance against contract
## Appendix 1- Tri-Borough Strategic Project Portfolio

<table>
<thead>
<tr>
<th>Strategic programmes in Tri-Borough</th>
<th>Vision and impacts</th>
</tr>
</thead>
</table>
| **Tri-Borough Adult Social Care Transformation Programme** | **Tri-borough Adult Social Care** transformation programme is an overarching 3-year change programme that will:  
- Help achieve savings of £45m over three years,  
- Meet the increased demand for care services from an aging population and new Care Act  
- Improve the experience of people by making services clearer and easier to use and more joined up.  

The programme focuses on aligning assessment and care management services within ASC to create a consistent core service offer and operating model; building more personalised community delivered care services that help people to be more independent; integrating social services with health, focusing on intermediate short-term care and care for people with disabilities and long-term health conditions. |
| **Whole Systems Integrated Care** | **NW London WSIC programme aims to redesign models of care** to make better use of the total available resource within the system – to achieve effective and cost effective outcomes through implementation of integrated care models co-designed through multi-stakeholder collaboration. It involves 31 collaborating organisations across 8 boroughs and has been selected as one of 14 national pioneer networks.  

**The programme stratifies the total NW London population into cohorts based on care need and service utilisation.** Initial cohorts of particular interest are the over 75s and adults with long-term conditions (LTC).  

**There are 10 early adopter sites in NW London; 4 within the Tri-Borough area.** |
| **Better Care Fund** | National Policy initiative to create a pooled fund to develop integrated services across health and social care.  

15 constituent programmes of which this CIS is a core part in supporting and enabling the shift of activity to out of hospital settings  

The recent national changes to BCF have clarified that the pay for performance element is linked to successful reduction of Non-elective admissions. |
| **Primary Care Transformation Fund (PMCF)** | **PMCF is a national scheme set up to test access to primary care; NW London is one of the largest of 20 pilot PMCF sites. The programme includes work to:**  
(i) **Extend access and continuity** in the short term (by end of 2014/15)  
(ii) Support the development, and grow, **GP networks** that can hold contracts (in 2014/15 onwards)  
(iii) Put in place IT **infrastructure**, streamline appointment booking, broaden access and networked working.  
(iv) Provide the NWL **workforce** with training and education to deliver the new model of care. |
Appendix 2- Detailed Financial Model

As the business case demonstrates, it is preferable to procure an additional 19 neuro beds in order to:

- Reduce acute delayed transfers of care (DTOC) due to a lack of neuro rehabilitation beds;
- Provide care in the most appropriate setting;
- Increase patient and user satisfaction.

These can be translated to financial benefits, namely through the reduction of expenses associated with reductions in delayed transfers of care. Financial benefits have been calculated based on a go live date in April 2016. Appendix 3 will additionally specify the financial benefits and required investments should the service commence on January 2016.

Financial Benefits:
Some information removed as it is commercially sensitive.

To determine the benefit of decreasing DTOCs, the model first calculates the cost of a delay from both ICHT and CWH settings. This data is derived from the Rehab DTOC Cost data set provided from ICHT and NHS England, and indicates a £282 per day DTOC cost.

The calculated minimum DTOC bed days to be saved are approximately 1312 days. This is based on a two year average of 15 DTOC per patient (19.6 days for 13-14 and 10.4 days for 14-15 periods) for the total patient numbers for 14-15 which is 103 patients – with a reduction of by 85% due to having a SNRS Level 2. This will mean a total full year savings of £369,669- using the £282 daily cost for DTOC.

Investment Costs:
Removed as commercially sensitive
Appendix 4- Methodology explained: Calculation of DTOC patient numbers and required Neuro Rehab Beds

As mentioned previously in the section 1.4 of this Business Case, a consistent methodology (expanded below) was applied with the data available to calculate the number of patients that on a yearly basis experienced a delayed transfer of care for neuro-rehabilitation services, from two hospital sources: Queen’s Mary Hospital (Imperial College Healthcare Trust (ICTH), and Chelsea & Westminster Hospital (C&W). The completion of this gap analysis was in fact crucial to obtain the appropriate number of required additional SNRS level 2 beds, as described in the previous section 1.4 of this Business Case (and further expanded in this Appendix).

The numbers of patients waiting for neuro-rehabilitation and bed days delayed are coded primarily under Category C – awaiting further NHS care of the National DTOC codes.

Therefore the number of beds needed for meeting current demand was calculated by extrapolating neuro-rehab delays from the Category C DTOC data for both 2013/14 and 2014/15 (April 2014 - February 2015) using accurate and consistent data set from Imperial College HealthCare Trust (ICHT) – the highest referring hospital for neuro-rehabilitation services. It is needed to mention that a DTOC will refer to excess bed days above trim point.

Using actual full year 2013/2014 DTOC ICHT data to compare the number of total patients in Category C delays for ICHT (202 patients) with the number of ICHT patients with neuro-rehabilitation related delays (81 patients), we were able to assume that a minimum of 40% of the patients that experienced a Category C DTOC were neuro-rehabilitation patient associated waits.

This assumption was consistently carried over to calculate the number of 2013-2014 C&W patients associated with neuro-rehabilitation DTOCs (28 patients) from the total C&W Category C DTOC patients observed in 2013-2014 (70 patients). The sum of ICHT and C&W Neuro Rehab DTOC patients for 2013-2014 then was 109 patients. With an average of 19 delayed bed days per patient, a total of 2071 bed days were lost for this patient cohort during the 2013-2014 period.

It was also assumed a relationship ratio of 65% to 35% of ICHT to C&W Neuro-rehab DTOC patients respectively (81 to 28 patients), for 2013-2014.

Once new ICHT DTOC data became available for the 2014-2015 period, it was agreed that it should be used to reflect current service system needs more accurately. Thus, the same methodology structure as explained above was used with the new 2014-2015 data set.

The newly available data set contained 8 out of 12 months (April – February 2015) of ICHT Neuro Rehab DTOC patient’s data (51 patients), therefore a monthly average extrapolation was used to calculate the full year number of ICHT patients for Neuro-rehab DTOCs in 14-15 (77 patients). Using the assumed 65% to 35% ratio of ICHT to C&W Neuro-rehab DTOC patients, an estimated number of Neuro Rehab DTOC patients for C&W was obtained (26 patients). The combination of these two set of patients brought us to the final number of 2014-2015 Neuro Rehab DTOC patients for this case: 103 patients. This is illustrated in Figure 1 below.
If a local SNRS level 2 was available, a total of 19 additional beds would have been needed to meet their needs, based on an average length of stay (LOS) of 8 weeks and a minimum bed occupancy rate of at least 85%. This is depicted in Figure 2 below.

The LOS represents the best in class performance for Level 2 services – depending on patient complexity. It was also the 2013/14 performance of both Albany Rehab Unit (UCLH) and the Alderbourne Unit (Hillingdon Hospital). Both provide SNRS level 2 in the North West London sector.
Background Papers

Health and Social Care Information Centre, Tables showing finished admission episodes for a primary and secondary diagnosis of a neurological condition, ICD10 codes G00-G99, by primary care trust, 2007-08 to 2011-

http://www.parliament.uk/business/publications/businesspapers/commons/deposited-papers/?page=4&td=2014-01-01&search_term=Department%20of%20Health&itemId=119014


Health and Social Care Information Centre, Tables showing finished admission episodes for a primary and secondary diagnosis of a neurological condition, ICD10 codes G00-G99, by primary care trust, 2007-08 to 2011-

http://www.parliament.uk/business/publications/businesspapers/commons/deposited-papers/?page=4&td=2014-01-01&search_term=Department%20of%20Health&itemId=119014

Neurological Alliance 2015 Manifesto: call to action for neurology.


The National Service Framework for Long-term Conditions, Department of Health March 2005

Royal College of Physicians and British Society of rehabilitation Medicine: national clinical guidelines (Turner-Stokes L) London: RCP, BSRM 2003