

**Business Case - Diabetes and Endocrinology Clinical Team**

The template is intended for use by all Trust Divisions and departments when presenting a case for capital and/or revenue investment. The case will be presented to the Executive Committee for decision to proceed.

<b>Division:</b>	<b>Medicine</b>
<b>Divisional Chair Name:</b>	
<b>Confirmation of support from Divisional Chair</b>	<b>Yes</b>

**1. Introduction**

Briefly set out the case and what benefits it will deliver. The case must be consistent with the Trust's Strategy as set out in the Annual Plan and IBP.

1. a Executive Summary

Funding is required for 2 additional WTE consultant posts, 1 WTE diabetes inpatient specialist nurse and support staff. The diabetes inpatient CQUIN for 2013-2015 is at risk without this investment and should be taken into account.

The investment will support a specialist clinical team working 7 days per week targeting inpatient diabetes to improve care and raise standards. The team will deliver:-

- Improved HSMR for diabetes specific conditions and co-morbidity mortality rates for inpatients to be amongst the best in the NHS in England
- Attainment of diabetes inpatient CQUIN standards (see Appendix 1)
- Reduced inpatient length of stay for inpatients with diabetes and related costs of unnecessary treatment
- Reduced admissions and readmissions related to diabetes
- Marginalisation of the Trust's incidence of 'never event' insulin errors
- Effective insulin pump and other specialist out patient services across the trust sites including Mount Vernon Cancer Centre
- Deliver full income from the introduction of a Best Practice Tariff for DKA-hypoglycaemia from April 2013

## 1. b. Main Introduction

The NHS Operating Framework made explicit reference to the need for acute trusts to deliver optimal in patient diabetes care and ensure wider insulin pump access for type 1 diabetes. Recent national service and patient surveys have demonstrated the challenges faced by the trust in delivering best outcomes. These were fully outlined in the recent presentation to the Risk and Quality Committee by Clinical Director for Diabetes and Endocrine services.

The department is requesting revenue to increase our capacity by 2.0 WTE consultants, 1 WTE Diabetes Inpatient Specialist Nurse and support staff (See section 4.0 ) in order to provide the services outlined in this case.

This case is aligned with the Trust's vision and aims and the objectives of the Diabetes Clinical Speciality Group within the Academic Health Research Network.

It will deliver improved clinical outcomes for diabetic patients and roll out of 7 day specialty working across the Trust.

There are four key areas where we have identified a need to improve/increase current levels of provision.

- A. Inpatient diabetes and endocrinology services- supporting 7 day working
- B. Capacity for outpatient diabetes (including insulin pump service and community diabetes) and endocrinology services
- C. Outreach services to Mount Vernon Cancer Centre
- D. Enhanced departmental contribution to Acute/General internal medicine

## A. Inpatient Services

We aim to provide a **systematic and proactive** diabetes and endocrinology service.

### (i) Inpatient Diabetes Services

The Lister inpatient beds hold a higher than national average of patients with diabetes- 9.8% Type 1 (vs. 6.7% national) ; 44.3% Type 2 on insulin ( vs 34.4% national). In addition because of the renal and vascular units, we have a higher complex caseload – 13.3 % of inpatients in Lister Hospital with diabetes are on Renal Replacement Therapy and 5.4 % are admitted specifically for diabetic foot disease.

Patient surveys revealed that only 68% of patients felt that staff had adequate knowledge about diabetes, and more worryingly only 35% of patients felt that staff worked together as a team to manage their diabetes (NaDIA 2011). By comparison other hospitals in our region scored the following for staff knowledge of diabetes as a condition: Addenbrookes 100% , Bedford 72.1%, Luton and Dunstable 72% and Norfolk and Norwich 61.5%. With the trusts aim to be amongst the top 10% of acute

trusts this shows that our patients think our staff knowledge base needs to be considerably improved if we are to achieve this goal.

#### *Higher Mortality*

After adjusting for age, sex, method of admission and HRG, in-patients with diabetes in East and North Herts have a SMR of 117 (95% CI = 108-127.2) when compared to diabetes inpatients across all trusts. (2009-2011, NDIS). When compared to non diabetes patients at ENH, matched diabetes patients have a SMR of 115.2 (95% CI = 107.7-121.5).

In patients who are admitted with a myocardial infarction and a co-morbidity of diabetes the Relative Risk for mortality in 2010-2011 was 184.9. Despite a substantial improvement in 2011-2012 (RR 131.1) we remain the third in the region and the sixth highest nationally for mortality in this group.

A recent trust audit confirms we are still not systematically delivering recommended standards for glycaemic control in patients with acute coronary syndrome .

#### *Excess Length of Stay*

Basic care processes for people with diabetes are not being followed. For instance, patients are spending on average 2 extra days in hospital because they are on intravenous insulin for longer than is needed. Daily input from the diabetes team will help ensure that this is minimised both by active decision making from the diabetes team and continuing education of ward staff to empower them to make such decisions themselves. 27% of our patients receive intravenous insulin infusions. Of these 30% are inappropriate in both use and duration (average 2 excess days) at a cost of £48,582 per year (NaDIA 2009).

#### *Insulin Errors*

Despite clear protocols, guidelines and junior doctor access to elearning modules, insulin errors remain very common in the trust. This remains one the top 5 causes of all drug errors in the UK, despite inclusion in the list of 'never events' from the NPSA. In the last two national audits of diabetes inpatients we were above average for insulin errors. (NaDIA 2010, 2011)

Of the patients on insulin 38.5 % experienced at least one insulin prescription or management error during their stay (2011 NDA) and 16.1 % had a severe hypoglycaemic attack (2011 NDA).

In the last year, there have been several episodes in the trust where patients have developed potentially life threatening Diabetic Ketoacidosis whilst on the wards. We believe these were potentially preventable had the diabetes team been involved earlier in the patients admission.

Another patient suffered a cardiac arrest secondary to hypoglycaemia after his insulin was given too late in the evening. Unfortunately such events are still occurring despite the best efforts of the current team to provide education to ward staff, the current time available for this is woefully inadequate.

### *Diabetic Foot Disease*

In this 'The year of the diabetic foot' the diabetes team are committed to improving the care of people with diabetic foot disease. The economic argument for investing in this area has been very persuasively made- Foot care for People with Diabetes- The economic case for Change, Marion Kerr, and NHS Diabetes.

There are now national standards for the treatment of diabetic foot disease. (Putting Feet First; NICE CG10 ;). All patients with diabetes must have a foot risk assessment carried out within 24 hours of admission. In 2011 only 17.9% of patients had this carried out at ENH.

Investing in this team will allow us to provide review of these patients within the NICE standards- within 24 hours of admission as well as a dedicated foot care clinic in order to enhance appropriate discharge.

At East and North Herts our patients with diabetic foot disease have an excess length of stay of 3.2 days when compared to similar patients nationally which is in part driven by the inability to provide safe and effective follow up of these patients on discharge. Although we have successfully increased our diabetes inpatient nurse service recently it is patients such as these, and the patients in the renal unit that need expert consultant input over and above that which our DISNs are able to provide.

Patients with diabetic foot disease need consultant Diabetologist led coordination of several key services such as prompt access to radiology, microbiology , vascular, orthopaedic, podiatric and orthotic teams in order to minimise the risk of amputation and to decrease the hitherto unacceptably high length of stay in this trust.

### *Extra Case Finding*

Despite augmentation of the diabetes in patient nurse service at least 30% of diabetes inpatients will be unable to access proactive specialist team input. The expansion of the nursing complement has already generated extra work through identification of patients requiring consultant in reach, for clinical issues unrecognised by general medical and surgical teams.

### *Patient satisfaction*

The DIPSAT national patient satisfaction survey was recently reported. ENH is below the national average for patient overall satisfaction with diabetes treatment whilst in hospital, above the national average for both hypo and hyperglycaemic events, below the national average for doctors and nurses knowledge of diabetes and below the national average for recommending the type of treatment they received whilst in hospital. (DIPSAT).

## ***The Solutions- a Summary***

East and North Herts NHS Trust is not currently able to meet the requirements for safe in patient diabetes care.

Expansion of the diabetes team will mean that we can deliver a **twice daily proactive ward round to all high risk areas** i.e. those areas identified by the team

as having a high throughput of patients with diabetes as a co-morbidity and/or areas where there have been a high number of diabetes related incidents. 2013 will see the introduction of new 'connected' blood glucose meters. These will provide real time reports of all blood glucose testing that occurs at point of care. The diabetes team will have access to these results. This will allow us to identify patients with both hypo and hyperglycaemia on the wards and provide a proactive belt and braces approach in preventing harm to our patients through prompt consultant review. The connected meters are one of several initiatives we are putting in place in order to decrease the number of incidents we see across the trust related to diabetes care.

The expansion of the consultant pool in the department will enable 7 day consultant working for diabetes and endocrine emergencies. In addition the two extra consultants will provide support for the consultant lead for inpatient diabetes in reintroducing the Think Glucose campaign which will provide staff education and clinical advice to inpatient ward areas on the safe management of diabetic patients and thus reduce the increased risks associated with insulin incidents, decrease mortality in patients with diabetes as a co-morbidity, iatrogenic deterioration in patients' glycaemia, hospital acquired heel ulcers, prompt and efficient treatment of diabetic foot disease as well as enabling more efficient case management and avoidance of unnecessary admission

Team expansion will also help support the delivery of the new peri-operative guidelines for care of patients in the trust and in the ISTC which are designed to support the increased use of day case surgery and enhanced recovery programme as well as prompt discharge – thus avoiding unnecessary increases in length of stay.

#### *Best Practice Tariff*

April 2013 will also see the introduction of a best practice tariff for the treatment of DKA and for patients admitted with hypoglycaemia. The following criteria will be required in order to achieve the tariff.

- a. Patients must be referred to the diabetes specialist team (DST) on admission and be seen within 24 hours (achieved through 7 day working)
- b. Patients must have education by a member of the DST prior to discharge which must include
  - (i) Review of their usual glycaemic control
  - (ii) Review of their injection technique/ home monitoring/equipment and injection sites
  - (iii) Discussion of sick day rules
  - (iv) Assessment of the need for home ketone measurement and provision of the education and equipment to enable this
  - (v) Provision of the contact numbers for the DST- **Including Out Of Hours**
- c. Review by consultant Diabetologist prior to discharge
- d. Be discharged with a written care plan to allow the patient to have active involvement in deciding, agreeing and owning how their diabetes is managed and this should be copied to the GP
- e. Following discharge the patient must have access to structured patient education and specialist clinic review within 3 months.

The tariff has been set at subHRG level with providers who are able to demonstrate that they have met the criteria being given an additional top up to bring the payment in line with the core HRG price. An expansion of the consultant team will help ensure we can provide the service that this tariff will demand. Currently the consultant team as it stands will not be able to offer this service so we will only be paid the sub HRG price (likely to be at 15% less than core) for these patients.

### **(ii) Inpatient Endocrinology Services**

Hospitalised patients have a high frequency of metabolic derangements- particularly in sodium and calcium balance.

Both hypernatraemia and hyponatraemia are associated with an increase in morbidity and mortality, as well as increased falls risk and increased length of stay. Despite 2 audits and trust guidelines, hyponatraemia remains poorly investigated and treated by non specialists. This has led to permanent disability and fatalities. A recent trust audit of severe hyponatraemia found an elderly cohort (median age 79) with prolonged length of stay – mean 31 days (range 1-131). Almost 30% had potentially life threatening hyponatraemia but only 1 in 8 cases were referred to the specialist team. None of the cases discharged without a documented reason for the hyponatraemia were referred. Several cases were discharged without the hyponatraemia being either investigated adequately or indeed, corrected.

The expansion of the consultant team will allow the provision of immediate advice of teams faced with these patients on call as well as increase opportunity for education and support to increase colleagues' expertise. The proposal would be to have a daily biochemistry flagging of extreme sodium and calcium abnormalities across the trust to enable the in patient diabetologist-endocrinologists to proactively case find.

## **B. Outpatient Services**

Pressures on all departments whose services have a heavy out patient focus have been seriously jeopardised through increased commitments of junior medical staff to supporting acute medical on call and ward based general medicine, compounded further through the EWTD and compensatory rest periods.

### **(i) Outpatient Diabetes**

We are currently commissioned to provide x New patient appointments and x Follow up appointments in diabetes for 2012/2013.

The current consultant numbers are unable to meet this need and the department has had to provide many extra adhoc clinics in order to mitigate the risk from the 13 week waiting list target. Following Diabetes Service Reconfiguration with community diabetes services, secondary care subspecialist clinics manage the most complex caseload in an MDT setting, further reducing capacity.

Patients with diabetic foot disease are often seen in clinics run in parallel with diabetic clinics by consultants. This is a very unsatisfactory way of running this service, where patients are not able to be given the benefit of a dedicated clinic slot for their de facto complex problems.

Increasing the consultant capacity will enable us to meet the need for 2.5 extra diabetes clinics and one dedicated foot clinic per week. In addition we will be able to provide extra capacity to the Community Diabetes service where the need for an additional weekly session has been identified. The requirement for additional clinic capacity has been discussed with the CCG GP leads for diabetes.

#### *Insulin Pump service*

This is explicitly stated as a priority in the current NHS operational framework. Our current consultant capacity is unable to meet the increasing demand of patients who are on insulin pump therapy (CSII). We currently have 80 adult patients on pump therapy and through transitional care have shared responsibility for up to 10 adolescents who will over the next 2 years require support within the adult service through a transitional clinic. The national target is that 15% of all adult patients with Type 1 diabetes may require insulin pump therapy. For ENH this means that of 1200 patients with type 1 diabetes, 180 should be considered for CSII. When targeted correctly, this will deliver well documented improvements in both diabetes control and quality of life. It is hoped that we will be able to reach this target within 5 years, but an increase in consultant capacity is needed in order to provide this enhanced service, offering at least a weekly clinical service.

## **(ii) Outpatient Endocrinology**

We are currently commissioned for xxx New patients and xxx follow up endocrine patients. The department has had to open up several ad hoc clinics in order to provide capacity. Unlike some endocrine services we also provide specialised metabolic bone clinic and support for these with complex lipid disorders within the department. In addition, we have current tertiary centre level expertise in subspecialist areas of endocrinology which should enable repatriation of up to 40 cases from London and delivery of transitional adolescent and late cancer survivor endocrine services,

We have identified the need for one extra endocrine clinic per week.

In addition, consultant expansion will enable final reconfiguration of consultant job plans with the Dept of Diabetes and Endocrinology, enable consideration of annualised job plans and permit endocrine subspecialisation enabling development of cancer endocrinology, obesity and transitional adolescent endocrine services within the trust.

## C. Outreach Services to Mount Vernon Cancer Centre

Currently patients at Mount Vernon do not have the benefit from any input from the diabetes and endocrinology team.

### *Diabetes*

Patients undergoing cancer therapy have complex diabetes needs because of their variable dietary intake, the use of steroids in their chemo/radiotherapy regimens and when they are entering the end of life stages. High dose steroid therapy also unmasks previously undiagnosed diabetes or induces secondary diabetes which often requires specialist input. Palliative care needs of those dying with co-morbid diabetes has also been identified as in need of support

### *Endocrinology*

Patients with both solid tumour and haematological cancers as well as those specific endocrine cancers often develop endocrine problems which need specialist input or complex hormonal replacement therapy but which at present we have no capacity to provide. In particular the impact of pelvic-abdominal radiotherapy and androgen deprivation therapy on bone health and reproductive endocrine status is not currently being addressed. Endocrine input to admissions with recurrent hyponatraemia and hypercalcaemia will be facilitated

The increased consultant capacity will enable us to provide a weekly session to make a start towards meeting this need. This will comprise ward based consultant review of diabetes and endocrine in patient issues aligned to a clinic for those with malignancy and endocrine comorbidity ,

## D. Acute and General Medicine

The additional consultant capacity we will increase departmental input to the physician on call service, particularly at a time when some services are decreasing their commitment to acute medicine as they increase their speciality on call commitments.

In addition, when on call, we will be able to provide expert diabetes and endocrine advise for the patients being admitted acutely thus decreasing the time from admission to expert input which so often has been shown to improve quality of care for complex patients.

## Summary

The expansion of the diabetes consultant team will benefit not only the patients directly under the speciality (both outpatient and inpatients) but will also provide significant improvement in the quality of care of patients in all divisions both surgical and medical by the provision of a proactive diabetes and metabolic in- reach service.

## 2.. The Case

### 2.1 Patient Needs

Outline the clinical quality case for the investment in the box below.

· High quality diabetes and endocrine emergency and inpatient services should ensure that:

- people with diabetes and endocrine problems in hospital have access to appropriate specialist expertise both for emergency and planned care
- there is appropriate use of specialist resources
- there are mechanisms in place to identify people who present with acute illness to screen for possible diabetes
- there is timely assessment and treatment of people who present with diabetic emergencies e.g. diabetic ketoacidosis, severe acute hypoglycaemia and diabetic foot ulceration
- there is proactive case finding of acute electrolyte imbalance
- there are monitored protocols to ensure that avoidable admissions do not occur –‘front door specialist input’
- all patients with diabetes who have emergency and planned in patient care have admission and discharge care plans
- all patients with diabetes do not have an unnecessarily prolonged length of stay or unnecessary readmissions
- there are monitored protocols in place to prevent patients developing heel ulcers
- there are monitored protocols in place to prevent patients suffering hypoglycaemia
- there are monitored protocols in place to ensure that patients with acute coronary syndromes and hyperglycaemia are identified and care optimised in line with local and national guidelines
- there are monitored protocols in place to ensure the appropriate use of intravenous insulin
- there is zero tolerance of prescribing errors and on the use of abbreviations for UNIT

In addition services should ensure that they

- deliver safe and effective care in accordance with NICE Quality standards for diabetes and the outcomes for diabetes set out in the NHS outcomes Framework,
- provide patient/carer/family education on diabetes not only at diagnosis but also during continuing management at every stage of care
- provide education on diabetes management to other staff and organisations that support people with diabetes
- have a capable and effective workforce that has the appropriate training and updating and where the staff have the skills and competencies in the management of people with diabetes
- produce information on the outcomes of diabetes care including contributing to national data collections and audits

- have adequate governance arrangements, e.g. local mortality and morbidity meetings on diabetes care to learn from errors and improve patient safety
- take account of patient experience, including Patient Reported Outcome Measures, in the development and monitoring of service delivery

The expansion of the inpatient specialist team is designed to augment the current service which is unable to deliver some of the core needs outlined above.

There is important published evidence of quality improvement in other trusts who have implemented these proposals. These confirm the clear benefit of a proactive rather than reactive in patient Diabetologist service which these posts will afford. Trusts that have provided a similar pro-active out reach service that we are aiming to provide have delivered excellent results-

- i. Number of inpatients with diabetes fell by 35%, avoidable admissions fell by 11%, delayed discharges by 15% and inappropriate discharge plans fell by 44% (1)
- ii. Potential savings of over £2 million due to reduced length of stay, reduction of admissions related to diabetes: 58% to 44% for emergency clinical areas; 13% to 5% for Department of medicine for the older person (DMOP). The frequency of hypoglycaemic episodes in DMOP decreasing from 16% to 8%. A reduction in re-admission rates: emergency clinical areas from 30% to 10%; DMOP from 18% to 12% & renal by 50% (2).
- iii. An overall reduction of 0.6 days in length of stay for people with diabetes compared to 0.3 for all patients. Emergency admission lengths of stay fell by 0.5 days and medical admissions fell by 0.8 days. Funding was secured to extend the project to create a dedicated team for elective surgical patients. (3)

It is recommended by the Royal College of Physicians ( 5) that there be 8 WTE consultants for every 500,000 population. The current establishment is 5 WTE which includes 1 WTE locum consultant. This contrasts with West Herts where there are at least 6 WTE currently.

## 2.2 Market Opportunity

Outline Trust and competitor analysis of current service.

National / local policy drivers (PCT, PBC, Network commissioning intentions).

- National, NICE and JBS IP –NHS Diabetes documents on challenging standards for in patient diabetes care , especially focusing on reducing insulin errors, improving foot care and management of metabolic emergencies
- Enhancement of local services to deliver robust and effective pathways for patients
- Provides sustainability for choose and book capacity which currently is not adequate to meet demand

- Centre of excellence for local area with the ability to market and offer choice to patients outside of the catchment area
- Dept with range of expertise which will rival other local services within Herts and Beds

### Length of Stay and Never Events Data

	Bed Days Observed for HRG K 2008*	Bed Days expected for HRG K 2008	Observed relative to expected for HRG K 2008	**Insulin Error %	**Severe Hypoglycaemia whilst inpatient %
ENH	2,255	1,544	46.0%	38.5	16.1
West Herts	2,087	1,069	95.2%	26.1	16.9
Bedford	657	844	-22.1%	13.1	7.9
Addenbrookes	2,148	893	140.5%	33.7	8
Luton and Dunstable	2,756	1,823	51.2%	14.5	17.5
Norfolk and Norwich	2,677	1,307	104.9%	13.4	16.3
National Average	n/a	n/a	n/a	23.9	9.6

\* Source- Clinical Indicators Extract ( HES 07/08)

\*\* Souce- NaDIA 2011

## 2.3 Project Description - Provide details of the:

### 2.3.1 Project Objectives

- To improve the quality of diabetes and endocrine patient care with a proactive input throughout Lister acute site and in addition supporting ISTC and acute sector peri operative care .
- To reduce excess mortality associated with the comorbidity of diabetes
- Development of extended sub specialised DM acute spec OPD services.
- To enable reconfiguration of endocrine services within trust freeing up capacity for subspecialised cancer-endocrine and transitional adolescent endocrine, and obesity services.
- To deliver the NICE quality standard s for both in- patient and specialised out patient diabetes care.
- To reduce the insulin errors, and other diabetes related management errors
- To improve diabetes foot emergency outcomes within the trust.

### 2.32 Project Deliverables

All project objectives can be delivered if the enhanced service is agreed through resources and improvement of pathways. The posts will support the clinical lead in an extensive clinical audit programme relating to aspects of in-patient diabetes care in line with national audit standards and NICE guidance.

### 2.33 Timetable for Realisation

Recruitment for substantive posts will take 3-4 months and therefore realistically timetable will be

Advertise April 2013

Interview June 2013

In post September 2013

### 2.34 Measures of Success

1. Improve the quality of care delivered to patients with diabetes as measured by the national diabetes audit, national inpatient diabetes audit and local speciality audits as well as published SMR data
2. Deliver 2013-2015 inpatient diabetes CQUIN
3. 100% in 18 week target
4. 5 weeks for 1<sup>st</sup> outpatient appointment
5. Reduction in incidents related to insulin errors/management of diabetic inpatients
6. Improve outcomes for patients admitted with diabetic foot emergencies
7. Enhanced care of diabetes metabolic emergencies
8. Enhanced coding for in patient DM activity inc foot disease- full BPT payments
9. Attainment of full BPT for DKA-hypoglycaemia admissions
10. Reduced length of stay and avoidance of admissions with diabetes
11. Enhanced general peri-operative DM care including input to ISTC
12. Enhanced care of patients with other metabolic disturbances including hyponatraemia

## 3. Activity/Capacity & Operational Issues

The 2 WTE consultants will provide the following programmed activities

	Post 1	Post 2
Inpatient Diabetes Sessions	4.0	4.0
Community Diabetes	0.5	
Diabetes OPC (inc admin)	1.5 (pump service)	1.0
Endocrine OPC (inc admin)	1.0	

Mount Vernon			1.0
Foot Clinic			1.0
On Call	POW	1.0	1.0
On call	Spec		
SPA		2.0	2.0
Total		10	10

The additional nursing post is required to deliver the 7 day working of the specialist team. This will be provided on a rota basis, with back fill of Monday – Friday clinical activity for those on weekend shifts.

### 3.1 Forecast activity (based on detail assumption) for both NHS and PP activity

OP Activity assumptions shown in Appendix 3

### 3.2 Summarise how the proposal will impact operationally, including impact on other divisions, services and patients

- Permanent OP capacity will be provided
- Input to all ward areas (inc ISTC and some cover of MVH) and theatres to improve management of diabetic patients/reduce incidents and risk
- Patients in all high risk areas- CCU, COE, AAU, Renal Unit, surgical wards will have daily consultant visits (Monday to Friday) and an out of hours on call service will be provided as below.
- Expertise for diabetic and metabolic complex cases will be provided on a 24/7 On call basis.
- Be able to achieve the core HRG price for DKA and hypoglycaemia.
- 18 week targets met

### 3.3 Risks – indicate key risks

Patients will continue to receive care that is suboptimal fragmented and reactive.

Redacted

### 4.0 Financial Analysis

Redacted

The Diabetes CQUIN income of £400k for 13/14 and 14/15 would be at risk without the implementation of this Business case.

There are other benefits which have not been quantified such as:

- It is anticipated a **reduction of excess bed** days of 0.5 days per episode would result due to the additional diabetic nurse input. The proposed posts would increase coverage of in-patients from 30% to 70%. It should be noted however that there are no immediate plans to reduce the bed compliment as a result of this proposal so no specific bed days savings have been attributed.
- The cost savings calculated from decreasing the length of inappropriate intravenous insulin use is £44k per annum from **decreased length of stay/ nursing time**.
- **Avoidance of re-admissions** - 18% of readmissions of Herts patients had a primary or secondary diagnosis of diabetes. Under Payment by Results (PBR) a PCT can withhold payments for patients readmitted within 28 days of discharge.

*Below data from a Midlands Trust regarding readmissions*

Group	3 month readmission	median LOS	Bed days from readmissions per 3 m	Bed days from readmission standardised per 100 admissions per year	Potential Bed days saved from outreach involvement per 100 admissions per year
Historic Controls (n=306)	89(29%)	4	256	465	223
Cases n=99	12 (12%)	5	60	242	

#### 4.2 Capital cost and funding source (Capital Programme, PPP, Fundraising)

None

#### The four Trust strategic objectives taken from IBP

- To consolidate acute services for complex or serious conditions onto a single site
- To work with colleagues in primary care to expand local access to specialist acute services
- To undertake more cancer care locally
- To improve the quality of all aspects of our services

#### Executive Committee outcome (taken from minutes of the meeting)

#### When complete please send to:

	Trust Secretary
	Director of Strategic Estates
	Capital Development Manager

	Head of Clinical Planning
	Medical Director
	Deputy Director of Finance

Example Business Case 2013

## References

1. R Mahto et al The effectiveness of a hospital diabetes outreach service in supporting care for acutely admitted patients with diabetes. QJMed (2009) 102:203
2. [http://www.diabetes.nhs.uk/our\\_publications/diabetes\\_success\\_stories/avoiding\\_admissions\\_and\\_improving\\_inpatient\\_care/improving\\_diabetes\\_inpatient\\_care\\_in\\_portsmouth/](http://www.diabetes.nhs.uk/our_publications/diabetes_success_stories/avoiding_admissions_and_improving_inpatient_care/improving_diabetes_inpatient_care_in_portsmouth/) Accessed 26.10.2012
3. [http://www.diabetes.nhs.uk/our\\_publications/diabetes\\_success\\_stories/avoiding\\_admissions\\_and\\_improving\\_inpatient\\_care/increasing\\_day\\_case\\_care\\_in\\_plymouth/](http://www.diabetes.nhs.uk/our_publications/diabetes_success_stories/avoiding_admissions_and_improving_inpatient_care/increasing_day_case_care_in_plymouth/) Accessed 26.10.2012
4. **Royal College of Physicians (London). Consultant Physicians. Working for patients. Diabetes , Fifth Edition- Endocrinology and Internal Medicine ,2011**

Example Business Case 2013

**Appendix 1**

**East and North Herts NHS Trust KPI supporting CQUIN for Acute Diabetes**

<b>Local contract ref.</b>	Code Unknown_Code Unknown
<b>Goal number</b>	7
<b>Goal name</b>	Diabetes
<b>Indicator number</b>	<b>7.1</b>
<b>Indicator name</b>	<b>Diabetes</b>
<b>Indicator weighting (% of CQUIN scheme available)</b>	15%

Example Business

<p><b>Description of indicator</b></p>	<p>All patients admitted to E&amp;NHT, who have a diagnosis of diabetes should be discharged with a completed care bundle.</p> <ol style="list-style-type: none"> <li>1. Patients who are on insulin at the time of admission are to be seen by the inpatient specialist DM team within 24 hours of admission during working hours (as DM control is so crucial to the patient's ongoing management, whatever their primary reason for diagnosis) and within 48 hours of admission during out of hours. In Q1 any diagnosis codes for patients where this can be within 48 &amp; 72 hours will be agreed, so that the most urgent patients can be prioritised, and also to ensure that no patient's hospital stay is lengthened to enable this assessment.</li> <li>2. Any patients who smoke should be referred to Smoking Cessation Services (with patient consent).</li> <li>3. Patients should be referred to self-management support programmes, such as DESMOND, DAFNE and IDAC, as appropriate.</li> <li>4. Patients who have co-existent anxiety/depression should be referred to IAPT, with their consent.</li> <li>5. The trust must introduce processes to ensure as far as possible that patients understand their medications, especially any new insulin regimes, prior to discharge. This could be evidenced by a patient signed medication review or a patient assessment sticker, each retained in the patient's notes.</li> <li>6. Ensure that a timely discharge letter is sent to the GP and Community Diabetes service where appropriate, with details of medications, changes of medications, follow-up arrangements etc.</li> <li>7. Improvement in 5 patient outcomes measures, to be agreed by end April 2013.</li> </ol>
<p><b>Numerator</b></p>	<p>Number of ENCCG registered patients admitted with relevant diagnosis codes and are discharged with a completed care bundle (coding to be agreed in Q1)</p>
<p><b>Denominator</b></p>	<p>Number of ENCCG registered patients admitted with relevant diagnosis codes</p>

<b>Rationale for inclusion</b>	This CQUIN aims to support the Trust in improving care for patients with diabetes as evidenced by patient outcomes and the results of the National Diabetes Inpatient Audit 2013. (coding to be agreed in Q1)
<b>Data source</b>	Local audit - new tool required for bundle provided
<b>Frequency of data collection</b>	Quarterly
<b>Organisation responsible for data collection</b>	East and North Herts NHS Trust
<b>Frequency of reporting to commissioner</b>	Quarterly
<b>Baseline period/date</b>	N/A
<b>Baseline value</b>	Not known so assume zero
<b>Final indicator period/date (on which payment is based)</b>	Year 1 2013/14      Year 2 2014/15
<b>Final indicator value (payment threshold)</b>	60% by end 2013-14, 95% by end 2014-15
<b>Rules for calculation of payment due at final indicator period/date (including evidence to be supplied to commissioner)</b>	Q1 provision of action plan, coding criteria agreement, piloted audit tool & agreement of data source & any validation needed; Q2, Q3, Q4 local audit to show patient numbers receiving care bundle on discharge
<b>Final indicator reporting date</b>	30 days after year end
<b>Are there rules for any agreed in-year milestones that result in payment?</b>	Yes
<b>Are there any rules for partial achievement of the indicator at the final indicator period/date?</b>	No
<b>Milestones (only complete if the indicator has in-year milestones)</b>	

Date/period milestone relates to	Rules for achievement of milestones (including evidence to be supplied to commissioner)	Date milestone to be reported	Milestone weighting (% of CQUIN scheme available)
Q1	Action plan (including data source & any validation process) agreed by 31.05.13, coding criteria to be agreed, local audit developed and tool piloted by end Q1		20%
Q2	Care bundle achieved for 30% patients discharged during quarter		20%
Q3	Care bundle achieved for 45% patients discharged during quarter		20%
Q4	Care bundle achieved for 60% patients discharged during quarter		40%
Total			100%

Example Business Case 2013