NORTHUMBERLAND HILLS
HOSPITAL

Northumberland Hills Hospital

Coaching Review

Final Report

Dec 1, 2014- January 16, 2015

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1.0 INTRODUCTION

1.1 THE COACHING TEAM

On October 22nd, 2014, the Board of Directors of the Central East Local Health Integration Network (Central East LHIN) approved Northumberland Hills Hospital's recommendation for a third-party coaching team review of the hospital's ongoing financial challenges. On December 1, 2014 a team was assembled by the Northumberland Hills Hospital (NHH) to conduct a coaching review of its organization.

The team consisted of:
• Janice Dusek, Team Leader. Ms. Dusek is the CEO of JD & Associates has extensive experience both as a leader within the healthcare/hospital system and as a consultant. Janice has over 30 years experience in hospital operations and has been part of several hospital operational and peer reviews. Janice has provided leadership and consulting services for many medium sized community hospitals. Janice has participated in several hospital operational reviews and peer reviews and has led several program and system reviews.

• Norman Rees, Review Team Member. Mr. Rees has over thirty years executive experience directing the financial strategies, planning and infrastructure of large public (hospitals and a provincial crown agency) and private corporations. He has broad experience in dealing with Boards of Directors. Norman complements his financial expertise with leadership roles in information technology, human resources and operations. As Vice-President Finance/CFO for large community hospitals, Norman has a strong understanding of hospital operations and has been involved in numerous benchmarking exercises.

• Zenita Hirji, Review Team Member. Ms. Hirji has over 20 years of healthcare experience working with hospitals, provincial governments, LHINs, and other healthcare agencies. Prior to establishing her consulting practice, Zenita led the MOHLTC's Acute Services Decision Support Unit. Zenita has been called upon by various hospitals to provide subject matter expertise in the areas of hospital funding, decision support, and performance improvement.

1.2 PURPOSE OF THE COACHING TEAM

The Coaching Team was hired to assist NHH with the development of a hospital improvement plan (HIP) that was to support NHH in the identification and quantification of barriers preventing the hospital from achieving a balanced financial operating position and identify mitigation strategies in response to these barriers. The Coaching Team was also requested to identify opportunities for further

integration with partners within the CE LHIN and in alignment with the Local Health System Integration Act.

The scope of the work was as follows:
• Identify an accurate picture of NHH's financial position and potential forecasts for the next three years,
• Identify and examine NHH's cost drivers,
• Conduct a detailed review of the past three years of Health System Funding Reform (HSFR) funding allocations looking specifically at the Health Based Allocation Model (HBAM) funding allocation and key drivers,
• Identify/quantify further opportunities for efficiencies/cost savings and revenue generation,
• Identify/quantify barriers preventing NHH from achieving a balanced operating position, recommend mitigation strategies,
• Identify opportunities for further integration with partners within the Central East LHIN and in alignment with the Local Health Integration Act, and
• Develop recommendations including:
    • a 100-day implementation plan
    • actions for long-term sustainability

1.3 PROCESS FOR THE REVIEW

Given concerns about a growing deficit, the Coaching Team was tasked with carrying out a financial review; conducting a comprehensive funding review; conducting a high level review of factors affecting operations and decision making within the organization.

To this end, the Coaching Team undertook a series of activities as follows:
• A number of interviews with NHH leadership, including some Board members, senior management team members, middle managers, and physicians.
• An external interview with the Central East LHIN administration team.
• A review of documentation including financial statements, Health System Funding Reform (HSFR) Funding allocation information, Ontario Cost Distribution Methodology (OCDM) results, Healthcare Indicator Tool (HIT) results, committee minutes, correspondence, etc.

2.0 EXECUTIVE SUMMARY

A Coaching Team review was conducted at Northumberland Hills Hospital at the direction of the Hospital CEO and Board.

The Coaching Team was requested by the NHH following the hospital's communication with the Central East LHIN that they were unable to balance their

budget and were not able to meet the agreed upon targets in the negotiated Hospital Service Accountability Agreement (H-SAA).

The decision to move to working with a Coaching Team reflected the NHH's desire to address the precarious financial position that it was in and to achieve and maintain a balanced budget while continuing to serve the health care needs of the residents of Northumberland and surrounding area.

A Review Team comprised of financial, funding and administrative persons spent four weeks reviewing written documents, submitted budget and funding information and correspondence. In addition, time was spent interviewing staff, physicians and other persons connected to NHH in an effort to determine what could be done to help the Hospital in the development of a meaningful and achievable action plan. The reports tabled at the NHH Coaching Team Steering committee and NHH Board of Directors reviewed the hospital's activity, comments regarding their financial position, the funding position, the ability of the Hospital to resolve their problems and recommendations for changes that need to occur.

An initial benchmarking review was conducted by HCM prior to the coaching team's contract with NHH and this was utilized in the detailed analysis carried out by the team.

It should be noted that if substantive numbers of the recommendations made by the Coaching team are not acted upon, significant financial hardship and the viability of the organization is in jeopardy. The growing deficit and cash flow issues compromise the organization's ability to deliver needed inpatient and outpatient care.

The recommendations made by the Coaching Team are meant to help NHH focus its attention and efforts on achievable changes/solutions that are sustainable, don't compromise patient care and can be supported by the Central East LHIN.

The recommendations also suggest opportunities for clinical and administrative integration opportunities and recommends the development of best practices consistent with fiscally responsible organizations.

While some of the report is anecdotal in nature (i.e. a reflection of conversations, comments, opinions etc.) it is reflective of the atmosphere that was observed and that the Coaching Team believes is contributing to the inability of NHH to resolve their deficit. Urgent action is required by NHH if further financial erosion and debt is to be avoided.

3.0 BACKGROUND AND CONTEXT

3.1 NHH AND THE HEALTH CARE ENVIRONMENT

Northumberland Hills Hospital (NHH)

The NHH is located within Northumberland County, approximately 100 kilometres east of Toronto and delivers a range of acute, post-acute, outpatient and diagnostic services to a mixed urban and rural population of approximately 60,000 residents. Northumberland County, being an attractive retirement destination, has a population which is significantly older than the provincial average. It has also been shown that residents of Northumberland County have a higher incidence of health status indicators which have been linked to the development of complex, chronic diseases.

Demographic trends from Intellihealth Ontario for Northumberland County show projected population growth from 84,667 in 2012, to 88,382 in 2020 (a 4.4% increase over 2011), to 94,138 in 2030 (an 11.2% increase over 2011). There is an expectation that there will be a significant shift in the population distribution by age group. The population is relatively old when compared to the Central East LHIN and the province as a whole: 18% of the people in NHH's catchment are 65 or older, compared to just 14% in the Central East LHIN and Ontario. The proportion is even higher (24%) in the Town of Cobourg, which represents roughly one third of NHH's catchment population. The over-65 age group will grow by 36.9% by 2020, and a further 40.6% by 2030, which is almost double the current population of seniors. By contrast, the under-65 age group will decrease by 4% by 2020, and 7% by 2030[1]. Age is consequently a key driver of the primary health challenges that NHH's population faces – injuries, immobility and disability, high blood pressure, heart disease, strokes, and cancer. This reality helps to inform the client population that NHH serves and the challenges it will face in the future.

NHH is an acute care hospital, which delivers a broad range of acute, post-acute, outpatient and diagnostic services. Acute services include emergency and intensive care, medical/surgical care, and obstetrical care while post-acute services include restorative care, rehabilitation and palliative care. Mental health care, chemotherapy, dialysis and other ambulatory care clinics are offered on an outpatient basis through partnerships with regional centres and nearby specialists. As well, NHH offers a full range of diagnostic services, including magnetic resonance imaging (MRI), computed tomography (CT) and mammography.

[1] Stewart Sutley, Senior Director, System Finance & Performance Management for the Central East LHIN, Briefing Note, Central East LHIN Board of Directors, October 14, 2014

In the seven fiscal years since the Central East LHIN assumed funding responsibility for NHH (2007/08), NHH has incurred four deficits and three surpluses in its operations. For the fiscal year ending March 31st, 2015, NHH was once again projecting a significant operating shortfall (approximately 2 per cent, or $1.45 million against a budget of $65 million).
In-year financial pressures identified by NHH prior to the review include:

- Increase in service activity and acuity (ED visits have increased 8.9% and admits have increased by 7.9% from Q1 2013/14);
- Increase in ALC cases and patient days due to system issues and lack of resources in the community;
- Surge costs of 4.6% and more over last fiscal year;
- Increase patient transportation costs; and
- Increased sick-time expenses.

3.2 Environmental Scan

The NHH has made great strides in the past several years to redefine its vision for the future and ensure it provides care to the community. NHH is undergoing dramatic shift in care provision providing services to a largely older population, thus creating a hospital that has the potential for a compelling future – one that must be built on solid partnerships and a shared vision.

We wish to thank the NHH team for the opportunity to conduct this Coaching Team Review. The cooperation we received from all parties was outstanding. The current NHH Board is comprised of extremely engaged directors committed to creating an organization which will support excellence in care for the community it serves. The hospital's physician leaders are dynamic, forward-thinking and extremely committed to their patients and the community. They are, justifiably, very proud of the accomplishments and progress within their individual programs.
The NHH is also fortunate to benefit from a very committed leadership team. At the regional level, the Central East LHIN is very supportive of NHH and continues to be understanding of NHH's current challenges, as well its unique role within Northumberland County.

NHH enjoys an extremely positive and enviable relationship with its community as demonstrated by its highly successful fundraising campaigns and the capital campaign which supported the development of this very impressive "new" building built in 2003.

Our engagement process resulted in our interviewing over 20 individuals (A list of all persons and groups interviewed can be found in Appendix A) - all of whom were passionate about NNH and the care it provides to the community. The comments and suggestions from those engaged in the interview process can be broken down into three headings as outlined in Figure 1:

1. Systems & Integration
2. Clinical /Operations

3. Funding/Finance.

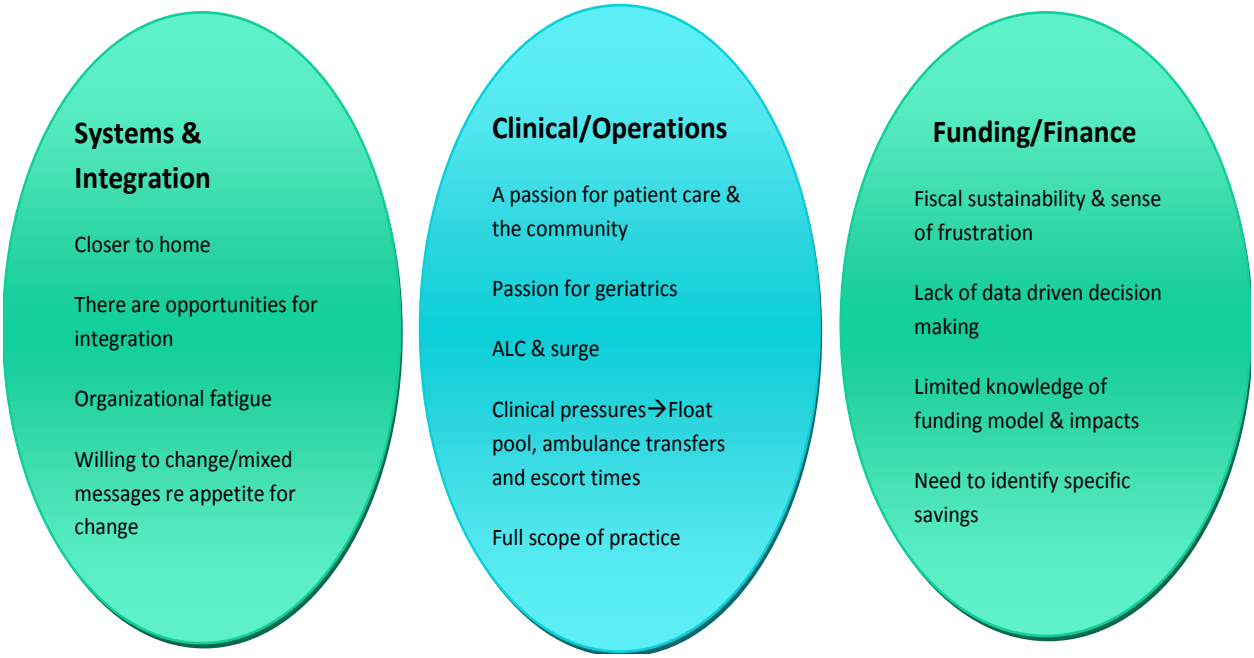


Figure 1: Categorization of Environmental Scan Comments

Under *Systems & Integration* it was identified that there is a need to treat patients from the region closer to home and the need to address integration opportunities with larger hospitals and community organizations.

Many stated that the organization/staff were tired from always trying to do more with less and also feeling frustrated with not being able to come up with solutions that would sustain the required change to prevent yearly financial instability. Many of those interviewed stated that the organization is fatigued from continuously trying to balance its budget, deal with surge issues and find ways to move ALC patients through the system. With this being said many identified that they wanted to support NHH in the changes that are require do support the organization in meeting its challenges, however , we did received mixed messages regarding the appetite for change.

Clinical/Operations Issues. Despite the challenges NHH faces, the Review Team was impressed by the collective commitment on the part of the Board of Directors, leadership team, and physicians to ensure patients receive safe, quality healthcare. There was a stated passion for patient care and the community the hospital serves and solid support for providing excellence in geriatric care. As previously mentioned, ALC and surge issues were identified as key issues that consumed care giver time and energy on a daily basis, and that this coupled with other clinical pressures such as the requirements to support ambulance transfers, and supporting

the funding of a float pool were all seen as major challenges. Several administrative/clinical staff identified that there were some concerns related to current staff being able to practice to their full scope of practice to support the current levels of patient acuity.

Funding /Finance. There was an overwhelming sense of frustration as it related to fiscal sustainability of the organization. Many of those interviewed did not know what the organization could possibly do more of or change to become more efficient. Many also highlighted that the organization was in need of a more robust data driven decision making process and that the organization needed to update its knowledge and skills surrounding the current funding models and requirements of the Ministry of Health and Long-Term Care (MOHLTC).

4.0 OVERVIEW OF FINDINGS

To put it simply, NHH has found itself in a bit of a quandary, despite laudable efforts to improve efficiency, patient flow and access to care over the past several years. The hospital went through a large community engagement process in 2009, which saw the redesign of hospital programs to support the care requirements of the community. Many system changes were created and resulted in the shift away from ambulatory services and a redesign of services away from providing long term care to more acute care services. Physician recruitment to support this shift in acuity has been successful as demonstrated through the solid physician base to support coverage of the ICU and hospitalist program. However, of late, the hospital has been suffering with increased ALC numbers and increase in surge patients which puts the hospital at a "Tipping Point" where systems and process need to be modified from a reactive crisis resolution perspective to one which supports proactive movement of patient within the system. The need to find support to transition ALC patients into care situations in the community rather than remain in hospital beds is and area for further consideration.

There is an inappropriately high occupancy rate of ALC/long stay patients. This situation has increased significantly over the past year. Not only has this led to overcapacity and reduced access for acutely ill patients, but it has invariably resulted in diminished efficiency and deteriorating performance metrics.

This being said, the ability to capitalize on the new funding formulas and allocation of Quality Based Procedure metrics within the current and future funding allocations are challenging NHH. As well, the financial position of the organization is a precarious one which potentially will thwart its sustainability.

The recommendations in this report address strategies which will support the financial viability of the organization, the requirements for the redesign of models of care and the skill mix needed to provide this care at the bedside, and the need to

rigorously pursue utilization management strategies to improve capturing of funding data to ensure NHH's capacity remains optimal. A system solution is required to provide sufficient non-acute care resources to ensure that acute care capacity can be used as intended. The Community Care Access Centre (CCAC) is vital to the success of this strategy, given the role as gate keeper to non-acute, community and home-based services.

NHH will need to undergo a change in case mix and acuity over the next three years, which will require diligent monitoring of activity and metrics to inform requisite 'course corrections'. NHH must be ready to seize the opportunities and challenges posed by this Coaching Team, which requires a fundamentally different strategic approach than a traditional global budget.

The report also recommends service integration opportunities which need to be looked at to support future organizational sustainability.

This report recommends a number of strategies and investments required to bridge and ramp-up financial and funding analysis, and realignment of resources to support organizational sustainability.

5.0 THE FINANCIAL SITUATION

NHH's present financial position is critical and not sustainable given its current funding level and the cost of programs and services which are delivered. During the past several years the hospital has undertaken, in a prudent and appropriate manner, numerous operational restructuring and efficiency measures, however in so doing has depleted its fiscal capacity and actions were not taken to recoup those restructuring and efficiency costs in subsequent years.

For fiscal year 2014-15, depending on the one time revenue assumptions made, NHH will complete the year with either a small surplus or small deficit.

Based on assumptions made for the next 3 fiscal years (2015-2018), NHH's financial position will deteriorate further and undermine its capacity to fulfil its immediate role.

The past 5 years (April 1, 2009- March 31, 2014)

The past 5 years saw NHH significantly restructure its operations to address its funding challenges, with the most significant restructuring occurring in fiscal 2009-2010.

NHH's operations from April 1, 2009 through March 31, 2014 were balanced before costs associated with restructuring, debt service obligations and the 2013-2014

Working Capital Relief Funding from the CELHIN. However, restructuring costs together with equipment loan repayment obligations (10 year fixed loan agreement that commenced in September 2005) largely depleted NHH's accumulated cash. Subsequent year's fiscal operating performance did not plan for, or result in actual surpluses' necessary to recover or pay for these costs. (Note: the only substantial means for NHH to generate cash is from surpluses), thus resulting in limited fiscal capacity.

The timing of cash flows from the Foundation for capital equipment (funds are generally flowed to the hospital in the fiscal quarter following expenditure by the hospital) has also affected NHH's cash position.

As a result, NHH has limited fiscal capacity to withstand future fiscal pressures.

Appendix B outlines the major changes in NHH's cash position and results from operations over the past 5 years and illustrates a $4,871K change in cash from $4,101K to $(770)K and a cumulative deficit of $2,089K.

Additionally, NHH's working capital and net assets positions have been further impaired as noted below.

	March 2014	April 2009
Working Capital	$(5,628) K	$(3,185) K
Net Assets	$(3,349) K	$(7,309) K

2014-15 Forecast

Depending on the one time revenue assumptions made, NHH is projected to finish fiscal 2014-15 with either a small surplus ($192K) or small deficit ($228K). The final accounting treatment of prior year's dialysis expense recoveries will impact the year end projection.

The current projected year end operating forecast is based on NHH's October 2014 forecast and was amended for amortization of deferred capital grants (DCG) and one-time revenue.

The following chart outlines the changes:

	Includes Dialysis	Excludes Dialysis
October 2014 operating position	$(615) K	$(615) K
Net adjustment for DCG amortization	272	272
One – time revenue:		
a. Cancer Care Ontario	115	115
b. Prior years dialysis expense recoveries	420	0

Projected Operating Position – March 31, 2015	$ 192 K	$(228) K

The 2014-15 year- end operating position assumes:

- No further Working Capital Relief Funding as outlined in the March 20, 2014 letter from the CELHIN and
- That NHH retains the $423K in Working Capital Relief Funding received in 2013-14.

Assuming a $192K year- end operating position, working capital and net assets improve over March 2014, however, the results remain problematic.

	March 2015	March 2014
Working Capital	$(5,374) K	$(5,628) K
Net Assets	$(7,116) K	$(7,116) K

2015-2018 Forecast

Given its current financial challenges NHH requested, as part of the Coaching Team Review, the development of a potential forecast for the next 3 years.

A financial model has been developed based on a set of basic assumptions (see Appendix C). The model has been set up to accommodate assumption changes, thus enabling understanding of the impact of changes on the financial position of the hospital, including the statements of operations, financial position and cash flow.

Key basic assumptions include:

- Transitional funding for restructuring costs and leadership capacity,
- Underlying inflation rate of 1.0% to 1.5% per year, plus pay equity provisions for certain employee categories,
- Operating investment provisions to support NHH going forward and a provision related to support upcoming changes to their clinical information system. The amount and timing of these investments still needs to be finalized.
- Operational efficiency opportunities are phased in over 2 fiscal years, commencing in 2015-16. 2015-16 savings are assumed to commence October 2015, thus initiatives need to be ready for implementation by April 1, 2015,
- Restructuring costs reflect collective agreement provisions,
- Capital expenditures equal amounts outlined in the hospital's 5 year plan and funding equals expenditures. Capital expenditures will require updating to reflect available funding, and

- Cash flow assumes that capital expenditures will not occur until funding has been provided.

The basis of the 2015-2018 financial model is NHH's preliminary 2015-16 operating budget (draft #3 – November 19, 2014).

In addition to the model's basic assumptions, NHH considered 2 options for efficiency opportunities based on externally provided benchmarking material. NHH had contracted, in June 2014, with HCM to undertake an operational efficiency benchmarking review against selected peer hospitals. NHH has undertaken similar reviews, through HCM, in past fiscal years.

The 2 options considered and reflected in the financial models were $1M and $2M in annualized efficiency opportunities.

The following table (Table 1) summarizes the impact of the basic assumptions and efficiency opportunities on NHH's financial position over the 2015-18 time-frame.

000's	2014-15	2015-2018 Projection	
	Forecast	Option 1 - $1M annualized savings	Option 2 - $2M annualized savings
Net Operating Position, before 1-time revenue (Note1)	- 343	- 5,301	- 5,257
One time revenue	535		
Base Net Operating Position (Note 1)	192	- 5,301	- 5,257
% Total Revenue		-3.1%	-3.0%
New Investments			
Provision for Decision Support & Financial Analyst		521	521
Leadership Capacity to support transition - one time		420	420
Provision to support redesigned model of care		450	450
Provision for Clinical Information System expenses		1,300	1,300
	192	- 7,992	- 7,948
% Total Revenue		-4.6%	-4.6%
Efficiency Opportunities with minimal change in service delivery		2,250	4,500
Restructuring Costs		837	1,674
Transitional Funding to cover Restructuring & Leadership Capacity Costs		1,257	2,094
Net Operating Position, before substantive implementation of recommendations	192	- 5,322	- 3,028
% Total Revenue		-3.1%	-1.7%
FINANCIAL POSITION			
Cash position	- 1,104	- 6,148	- 3,857
Working Capital	- 5,374	- 9,958	- 7,663
Net Assets	- 7,116	- 12,439	- 10,144

Note 1 - The difference between the Base Net Operating Positions is due to short term interest expense.

Table 1: Impact of Assumptions & Efficiency Opportunities, 2015-18

The $2 million annualized savings option over 3 years shows:

- $5,257K deficit based on general inflation assumptions of 1.0 % to 1.5% per year.
- $2,691K in new investments.
- $4,500 in operational efficiency changes that are anticipated to be attained with minimal change in service delivery.
- $1,674K in restructuring costs to attain the operational efficiencies.
- 2,094K transition funding for restructuring and leadership capacity costs.

With these cost, revenue and savings assumptions, a $3,028K operating deficit remains before substantive implementation of the Coaching Team's recommendations.

NHH's cash, Working Capital and Net Assets deteriorate further to an unsustainable level.

The summary of the financial model assuming $2 million in annualized savings is depicted in Appendix D.

Overall Financial Findings

In the short term, NHH may require a cash infusion or temporary bank line extension.

With current financial model assumptions, operational changes will take 2 to 3 years to complete and stabilize the organization, both clinically and financially.

NHH financial position is not sustainable without major financial assistance and clinical change.

Finance Recommendations

NHH will not be able to balance its budget in the next 3 years, thus transition funding is required to support the hospital as it deals with its organizational and financial realignment.

Internal processes should be enhanced through:

- Developing multi-year financial projections including statements of operations, financial position and cash flow.

- Creating and providing timely management information that supports decision making to all levels of the organization, including the Board and its Committee's, particularly related to business lines and focussed funding analysis.

- Developing more robust financial impact analysis on the projected cost of new or replacement physicians on the hospital's operating budget.

- Ensuring that operating budget projections adequately identify all activities and initiatives so that their impact can be appropriately assessed during the budget planning process.

6.0 HSFR OVERVIEW

On April 1, 2012 the (MOHLTC implemented the provincial HSFR strategy in acute hospitals and CCACs. HSFR has three components:

1. Global Base Funding – Existing base budget funding diminishes to 30% (as opposed to 98% in prior years) of the provincial healthcare allocation by 2014/15

2. HBAM (Health Based Allocation Model) – A population based approach, which takes into consideration catchment area demographics, growth, and facility characteristics comprises 40% of the total provincial hospital allocation, and

3. QBPs (Quality Based Procedures) – A series of inpatient and outpatient procedures which will be reimbursed on a "price times volume" basis. The MOHLTC visions is that these procedures will eventually account for 30% of the provincial health spend.

The HBAM/QBP funding components were phased in over the last three fiscal years and were subject to a mitigation strategy in order to allow organizations to respond and plan for the changes and to maintain stability of the health system. A number of QBPs (Table 2) have been identified by the ministry for implementation over the next three years:

Year 1 – 2012/13	Year 2 – 2013/14	Year 3 – 2014/15
1. Knee Replacements 2. Hip Replacements 3. Cataracts 4. CKD (Chronic Kidney Disease)	5. Chemotherapy/Systemic Treatment 6. Endoscopy 7. COPD 8. Non-Cardiac Vascular 9. Congestive Heart Failure 10. Stroke (3 types)	11. Hip Fractures 12. Bi-lateral Joints 13. Tonsillectomy 14. Neonatal Jaundice 15. Pneumonia

Table 2: Quality Based Procedures Implementation Timetable

HBAM

HBAM is a population health-based funding formula. As such, HBAM makes predictions of future service levels based upon past service levels, population and

health information. Population information includes basic demographic information such as age, gender and growth projections, as well as socio-economic status (SES) and rural geography. Population health-based resources, i.e. service levels (volumes) for hospitals are adjusted for growth based upon multi-year population estimates. Patient flow and provider market shares are not limited by LHIN boundaries; this ensures that hospitals receive funding based upon all individuals cared for, independent of the LHIN within which an individual resides.

Since HBAM is based on a series of statistical regression analyses of patient (i.e. population age, gender, growth rates, SES, etc.) and facility characteristics (teaching, rurality, tertiary activity, etc.), there are many variables that will impact a hospitals performance. While many of these variables are beyond the hospital's control, there are some factors which individual hospitals can influence.

6.1 NHH HBAM PERFORMANCE

The hospital's HSFR funding allocation is summarized in Table 3[2].

HSFR Funding Summary	12/13	13/14	14/15
Global Base Funding	$ 24,298,740	$ 21,505,474	$ 21,039,696
HBAM Allocation	$ 14,107,839	$ 13,315,127	$ 13,419,281
QBP - MOH	$ 556,380	$ 3,734,809	$ 4,814,468
QBP- CCO (excl. CKD)		$ 897,404	$ 1,003,089
MOH Total	$ 38,962,959	$ 39,452,814	$ 40,276,533

Table 3: HSF Funding Allocation for NHH

Overall, the MOH HSFR allocation has increased over the last three years to $40,276,533 in fiscal year 2014/15.[3]

The ministry's HBAM model is based on comparing a hospital's actual cost versus its expected cost (as derived by the model). Figure 2 below summarizes NHH's actual versus expected unit cost in comparison to other peer hospitals (as identified by the hospital's senior team).

[2] 14/15 funding amounts summarized in this slide are subject to confirmation regarding the QBP -CCO funding amounts

[3] NHH Schedule AB, CE LHIN, Jan. 2015

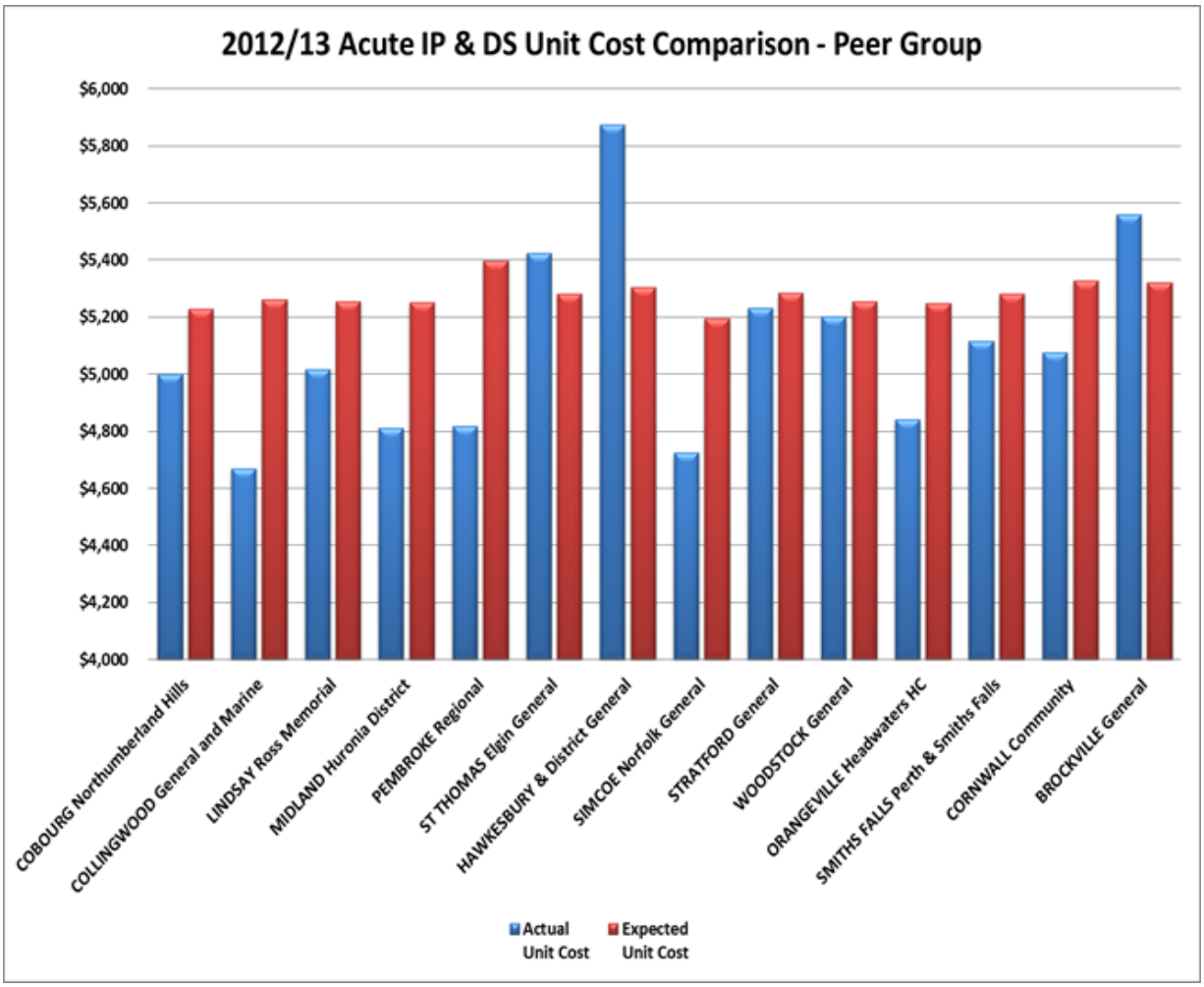


Figure 2: NHH and Peer Group Comparators Actual versus Expected unit cost

As exemplified in Table 4, NHH's actual unit cost is approximately $200 below the HBAM Expected calculation. This is aligned with the majority of peer group hospitals whose actual unit costs are also below the expected calculation.[4]

[4] This group of peer hospitals was identified by NHH as the preferred peer group for benchmarking purposes and was the same peer group used by the hospital in the recent HCM review. As such, this peer group was used by the coaching team for all benchmarking comparisons.

Facility Name	Actual Unit Cost	Acute Medical Trainee Days (MTD)	Acute LOC Tertiary Weighted Cases	Teaching Intensity Value	Tertiary Value	Distance Value	Expected Unit Cost	% Variance to Expected
COBOURG Northumberland Hills	$ 4,999	1,025	32	13.71	$ 26.54	$ 75.99	$ 5,229	-4.4%
COLLINGWOOD General and Marine	$ 4,670	2,886	52	32.61	$ 36.78	$ 79.79	$ 5,262	-11.2%
LINDSAY Ross Memorial	$ 5,018	617	138	5.43	$ 75.17	$ 61.91	$ 5,255	-4.5%
MIDLAND Huronia District	$ 4,812	821	61	10.23	$ 47.14	$ 81.59	$ 5,251	-8.4%
PEMBROKE Regional	$ 4,817	2,092	74	19.73	$ 43.35	$ 223.52	$ 5,399	-10.8%
ST THOMAS Elgin General	$ 5,426	2,570	210	20.20	$ 102.27	$ 46.91	$ 5,282	2.7%
HAWKESBURY & District General	$ 5,875	450	24	7.87	$ 25.64	$ 160.53	$ 5,306	10.7%
SIMCOE Norfolk General	$ 4,725	460	17	5.24	$ 11.77	$ 67.31	$ 5,197	-9.1%
STRATFORD General	$ 5,233	3,279	139	26.08	$ 68.58	$ 76.57	$ 5,284	-1.0%
WOODSTOCK General	$ 5,204	1,212	94	11.77	$ 56.40	$ 74.50	$ 5,255	-1.0%
ORANGEVILLE Headwaters HC	$ 4,840	1,684	59	20.18	$ 44.20	$ 71.95	$ 5,249	-7.8%
SMITHS FALLS Perth & Smiths Falls	$ 5,116	1,488	61	16.39	$ 41.39	$ 112.13	$ 5,282	-3.2%
CORNWALL Community	$ 5,077	1,047	120	7.00	$ 49.65	$ 160.46	$ 5,330	-4.7%
BROCKVILLE General	$ 5,562	-	97	-	$ 59.44	$ 150.48	$ 5,322	4.5%

Table 4: Impact of HBAM's Adjustment Factors

Table 4 above summarizes the impact of each of the HBAM adjustment factors influencing the HBAM Acute Inpatient and Day Surgery Expected Unit Cost calculation. Overall, the hospital's Acute Inpatient and Day Surgery Unit Cost is 4.4% below the expected unit cost. However, the hospital's ER Unit Cost is approximately 6% over expected (see Table 5). As such, the hospital should review its Emergency Department cost structure to identify possible cost efficiency opportunities so that it can be better aligned with the expected unit cost.

Facility Name	Actual Unit Cost	ER Medical Trainee Days (MTD)	Teaching Value	Final HBAM Expected Unit Cost	Variance to Expected	% Variance to Expected
COBOURG Northumberland Hills	$ 5,498	192	$ 108	$ 5,180.36	$ 318	6%
BROCKVILLE General	$ 6,539	-	$ -	$ 5,072.10	$ 1,467	29%
COLLINGWOOD General and Marine	$ 5,481	257	$ 143	$ 5,214.90	$ 266	5%
LINDSAY Ross Memorial	$ 5,808	101	$ 38	$ 5,109.63	$ 699	14%
MIDLAND Huronia District	$ 4,492	252	$ 109	$ 5,180.94	-$ 689	-13%
PEMBROKE Regional	$ 5,077	121	$ 66	$ 5,137.78	-$ 61	-1%
ST THOMAS Elgin General	$ 5,709	711	$ 290	$ 5,362.21	$ 347	6%
HAWKESBURY & District General	$ 3,975	83	$ 42	$ 5,113.93	-$ 1,139	-22%
SIMCOE Norfolk General	$ 4,539	190	$ 107	$ 5,179.15	-$ 640	-12%
STRATFORD General	$ 6,104	396	$ 282	$ 5,354.27	$ 750	14%
WOODSTOCK General	$ 5,540	-	$ -	$ 5,072.10	$ 468	9%
ORANGEVILLE Headwaters HC	$ 4,397	-	$ -	$ 5,072.10	-$ 675	-13%
SMITHS FALLS Perth & Smiths Falls	$ 4,098	-	$ -	$ 5,072.10	-$ 975	-19%
CORNWALL Community	$ 5,869	116	$ 35	$ 5,106.94	$ 762	15%

Table 5: ER Unit Cost

Another key factor in determining a hospital's HBAM allocation is the hospital's Base Funded Expense (BFE). The main intentions of applying the BFE to the HBAM expected expense is to recognize that not all of each hospital's HBAM expense is funded through MOH base allocation. In effect, the BFE is identifying the proportion of the hospital's expense funded through MOH base funding (versus one-time and other revenue sources).

NHH's BFE percentage in comparison to peer group hospitals is summarized in the bar graph below (Figure 3). NHH's BFE ratio of 77% is lower than the peer median of 86% and provincial median of 90% (for fiscal year 2012/13).[5] In 2011/12, NHH's BFE was at 81%, closer to the peer group average (see Table 6).

[5] MOH HSMI 2014

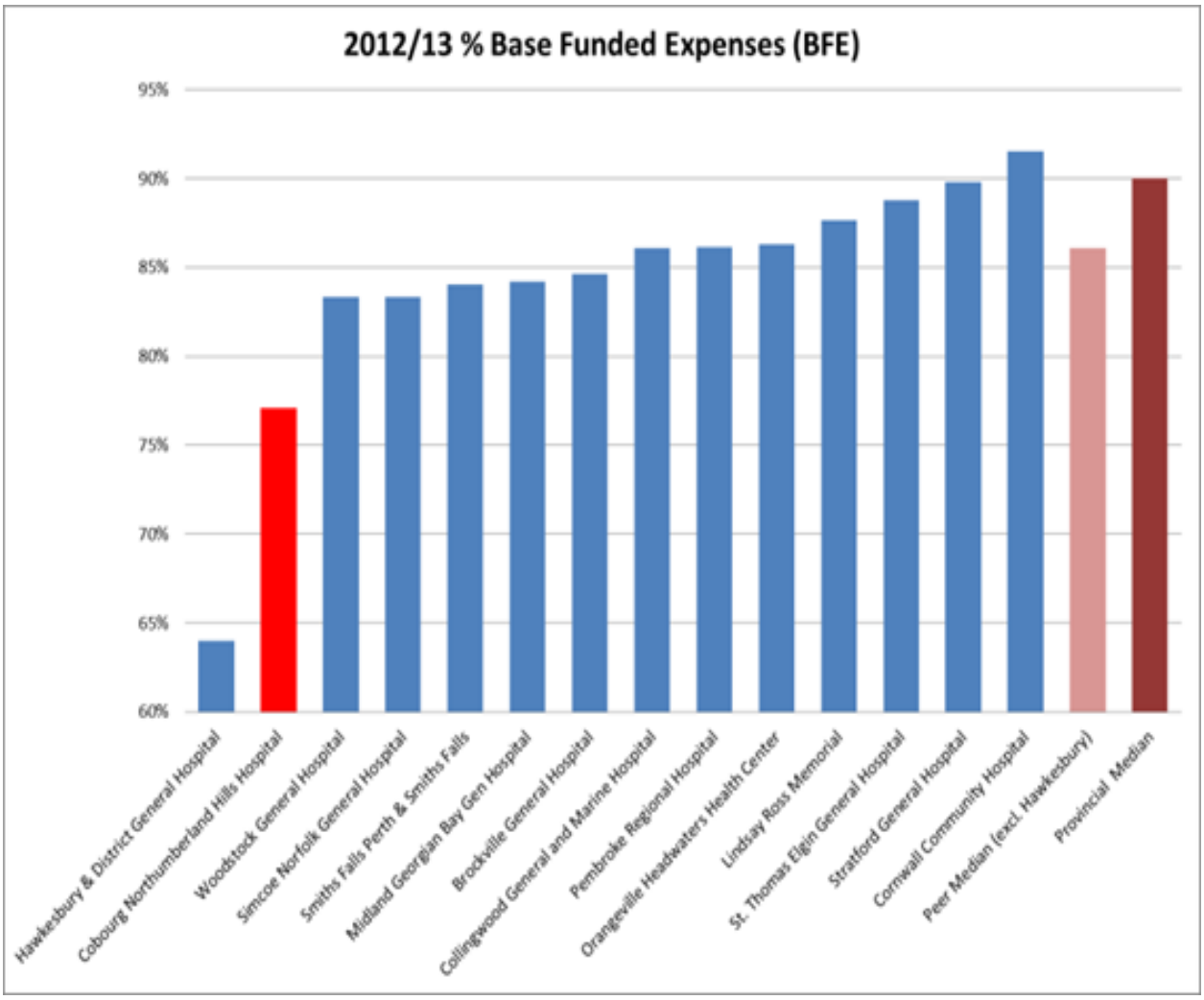


Figure 3: Peer Group BFE Percentage

Table 6 summarizes the BFE percentages in the last two funding allocations. BFE decreased in 2012/13 due to the following factors:

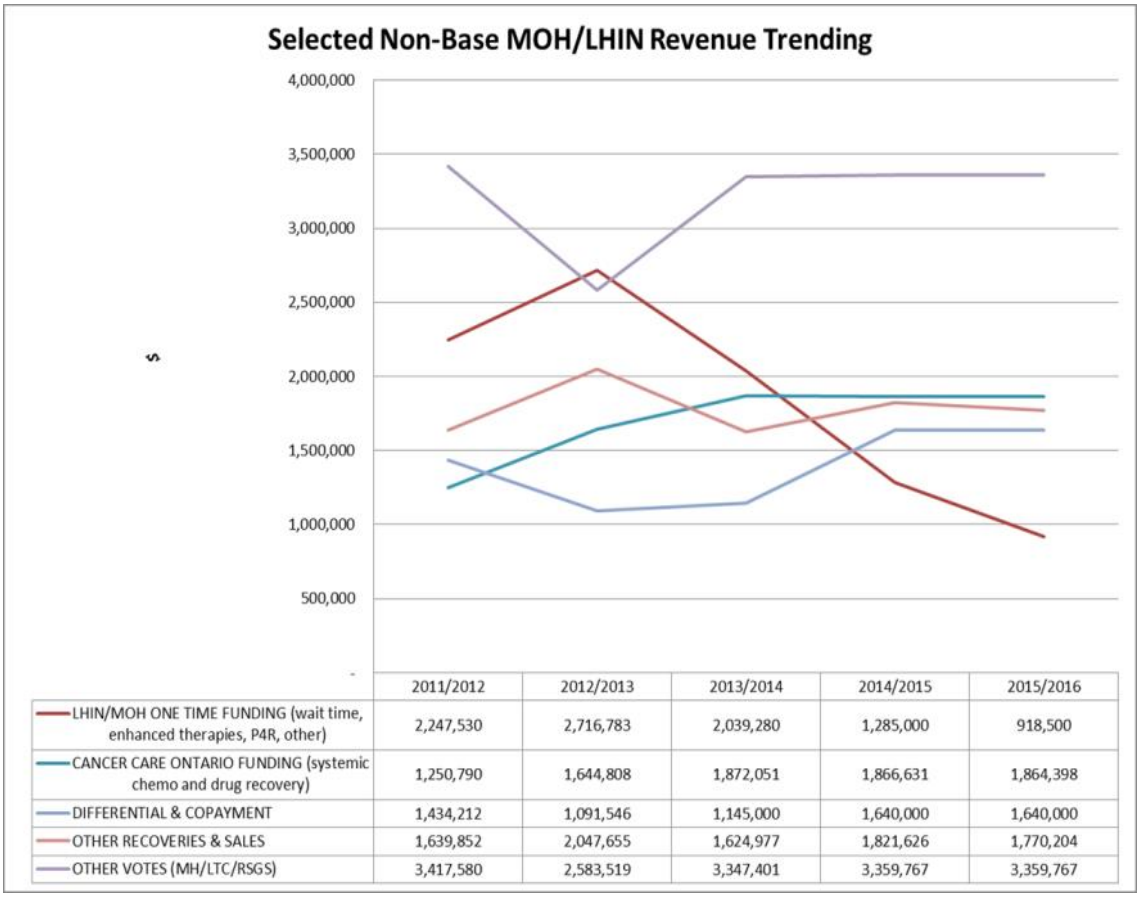
- Carve out increased by $1M, which decreased the closing base (numerator) - due to introduction of new QBPs in 12/13.
- Expenses (OCDM) also increased by $2.2M (increased denominator)
- This resulted in an increase of (Adjusted Expense - MOH base funding) of $2.2M

MOH Funding Stream	2012/13	2011/12	Variance
Base	$ 38,919	$ 38,341	$ 578
QBP Carve out*	$ 4,980	$ 3,925	$ 1,055
Closing Base	**$ 33,939**	**$ 34,416**	-$ 477
OCDM Expense	$ 51,980	$ 49,779	$ 2,201
QBP Carve out*	$ 5,391	$ 4,753	$ 638
CCO (non QBP)	$ 1,076	$ 693	$ 383
MOH/LHIN One-time (non QBP)	$ 1,481	$ 2,053	-$ 572
Adjusted Expense	**$ 44,032**	**$ 42,280**	$ 1,752
(Adjusted Expense - Closing Base)	**$ 10,093**	**$ 7,864**	$ 2,229
% BFE (Closing Base/Adjusted Exp.)	**77%**	**81%**	

Table 6: NHH BFE Percentage in the Last Two Funding Allocations

Since the BFE calculation does not include MOH/LHIN one-time funding and other revenue sources, it is helpful to review the amount of other non-base MOH/other revenue sources over time (see Figure 4 below)[6] .

[6] Note 2012/13 LHIN/One-time funding includes $838K for QBP funding (as Year 1 of MOH QBP funding was included in MOH/LHIN one-time funding allotments)



	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
LHIN/MOH ONE TIME FUNDING (wait time, enhanced therapies, P4R, other)	2,247,530	2,716,783	2,039,280	1,285,000	918,500
CANCER CARE ONTARIO FUNDING (systemic chemo and drug recovery)	1,250,790	1,644,808	1,872,051	1,866,631	1,864,398
DIFFERENTIAL & COPAYMENT	1,434,212	1,091,546	1,145,000	1,640,000	1,640,000
OTHER RECOVERIES & SALES	1,639,852	2,047,655	1,624,977	1,821,626	1,770,204
OTHER VOTES (MH/LTC/RSGS)	3,417,580	2,583,519	3,347,401	3,359,767	3,359,767

Figure 4: Non-Base MOH/Other Revenue Sources Over Time

Analysis of NHH OCDM Expenses has revealed that the overall increase of $2.2M in Net Direct and Overhead costs were due to the following:

- 3% increase in acute & newborn expenses (whereas activity decreased by 2%)
- 18% increase in NACRS Mandated Cost Centres, yet activity only increased 2%
- Other areas also experience some cost increases

Table 7 below summarize the relative growth in expenses in the NACRS mandated cost centres.

	Rehab			NACRS Mandated Functional Centres		
OCDM Categories	2011-2012YE	2012-2013YE	% Change	2011-2012YE	2012-2013YE	% Change
TOTAL NURSING INPATIENT SERVICES (EXCL. O.R./P.A.R.F	$ 3,084,907	$ 3,345,381	8%	$ -	$ -	
TOTAL AMBULATORY CARE SERVICES (excl. sel DS)	$ -	$ -		$ -	$ -	
TOTAL INPATIENT SURGERY AND SELECTED DS	$ -	$ -		$ 1,980,207	$ 2,198,591	11%
TOTAL DIRECT NURSING (IP & AMB)	**$ 3,084,907**	**$ 3,345,381**	**8%**	**$ 1,980,207**	**$ 2,198,591**	**11%**
TOTAL NURSING ADMINISTRATION	$ 85,598	$ 96,921	13%	$ 54,946	$ 63,697	16%
TOTAL NURSING COSTS	**$ 3,170,505**	**$ 3,442,302**	**9%**	**$ 2,035,153**	**$ 2,262,288**	**11%**
TOTAL DIAGNOSTIC AND THERAPEUTIC SERVICES	$ 1,036,054	$ 1,082,346	4%	$ 184,036	$ 347,136	89%
TOTAL FOOD SERVICES	$ 480,483	$ 461,665	-4%	$ -	$ -	
TOTAL DIRECT COSTS	**$ 4,687,041**	**$ 4,986,313**	**6%**	**$ 2,219,189**	**$ 2,609,423**	**18%**
TOTAL EDUCATION	$ 70,648	$ 110,998	57%	$ 33,450	$ 58,087	74%
TOTAL ADMINISTRATION AND SUPPORT	$ 1,310,863	$ 1,410,336	8%	$ 620,659	$ 738,053	19%
TOTAL RESEARCH	$ -	$ -		$ -	$ -	
TOTAL UNDISTRIBUTED FUNCTIONAL CENTRES	$ 27,797	$ 21,339	-23%	$ 13,161	$ 11,167	-15%
TOTAL OVERHEAD COSTS	**$ 1,409,308**	**$ 1,542,673**	**9%**	**$ 667,270**	**$ 807,307**	**21%**
TOTAL DIRECT & OVERHEAD COSTS	**$ 6,096,349**	**$ 6,528,985**	**7%**	**$ 2,886,459**	**$ 3,416,731**	**18%**
ADJUSTMENTS	$ (1,660)	$ (1,848)		$ (786)	$ (967)	
NET DIRECT COSTS	$ 4,685,765	$ 4,984,901	6%	$ 2,218,585	$ 2,608,685	18%
NET OVERHEAD COSTS	$ 1,408,924	$ 1,542,236	9%	$ 667,088	$ 807,079	21%
NET DIRECT & OVERHEAD COSTS	**$ 6,094,689**	**$ 6,527,137**	**7%**	**$ 2,885,673**	**$ 3,415,763**	**18%**
BFE - OCDM Next Expense						
differential						
PATIENT DAYS/VISITS/DAY SURGERY CASES	**10,300**	**10,800**	**5%**	**4,222**	**4,306**	**2%**

Table 7: Relative Growth n Expenses - NACRS Mandated Cost Centres

Based on the analysis summarized above, the coaching team offers the following HBAM Recommendations:

- Recommend a fulsome review of OCDM and alignment with reporting rules for 13/14 and 14/15, since this data will be used in subsequent funding allocations

- Would also recommend NHH pursue discussions with key stakeholders (i.e. LHIN/MOH) on incorporating appropriate one-time funding streams in to global base – where possible

- Also recommend NHH obtain formal MOU with Peterborough Regional Health Centre (PRHC) on level and type (QBP vs. non-QBP) of funding being provided to NHH for satellite dialysis.
    - QBP carve outs include Chemo/GI Endo funding, but no QBP funding identified in MOH allocation for CKD - yet paymaster accounts shows that the hospital received $1.9M from PRHC for Dialysis.

Documentation on how much of this dialysis funding is QBP vs. non-QBP is lacking.

- Recommend NHH conduct a detailed review of costs contributing to higher than expected ER HBAM cost per unit. HCM results may be useful in this regard.

6.2 NHH QBP Performance

A comparison of NHH QBP volumes versus peer group hospital shows that NHH had higher volumes of COPD, Pneumonia, and Tonsillectomy QBPs than the peer median(see Figure 5 [7]). NNH cataract volumes were much higher than peers 1,191 vs. 682.

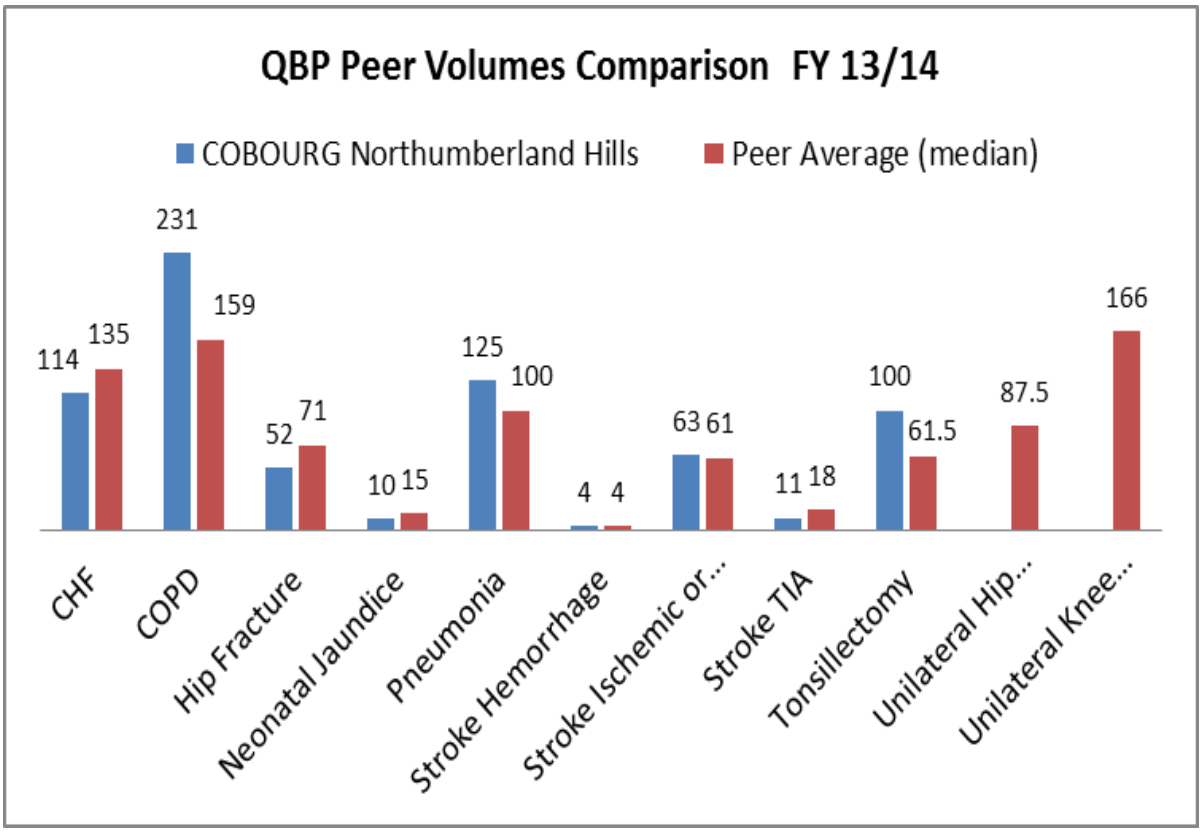


Figure 5: QBP Peer Volumes Comparison

Inpatient QBP average length of stay (ALOS) (Figure 6) is comparable to peers, however the ALOS for the three Stroke QBPs is shorter than peer hospitals.

[7] Cataracts excluded for display purposes only

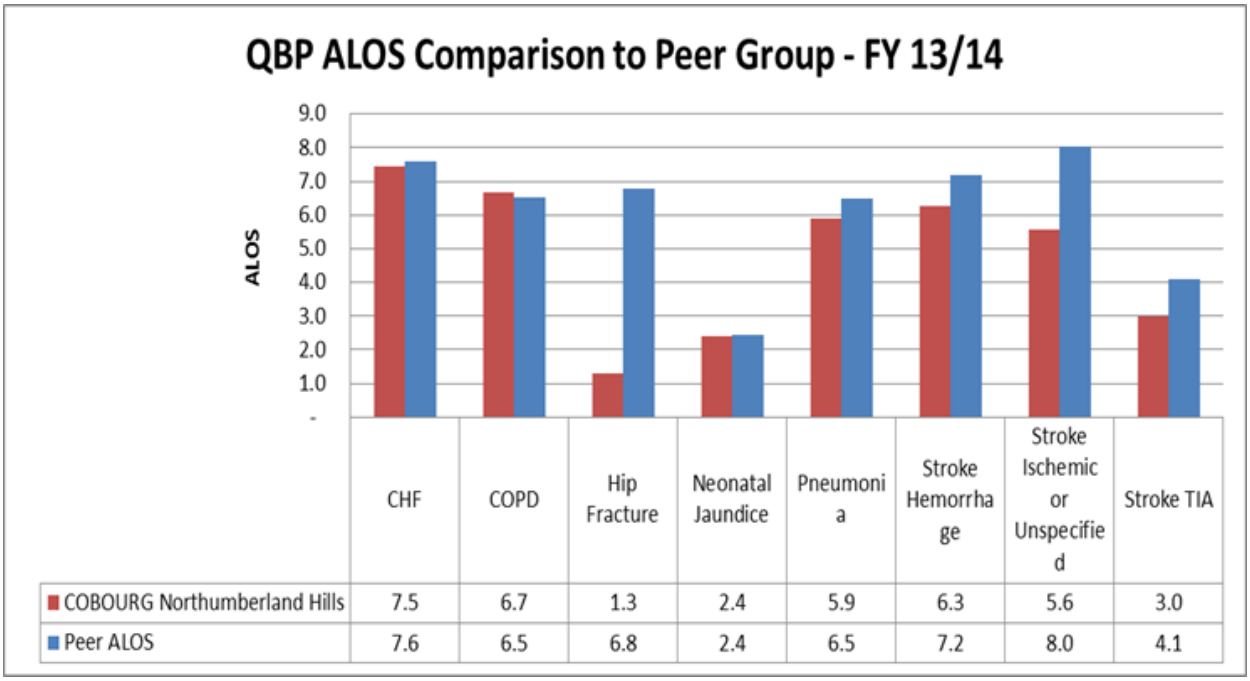
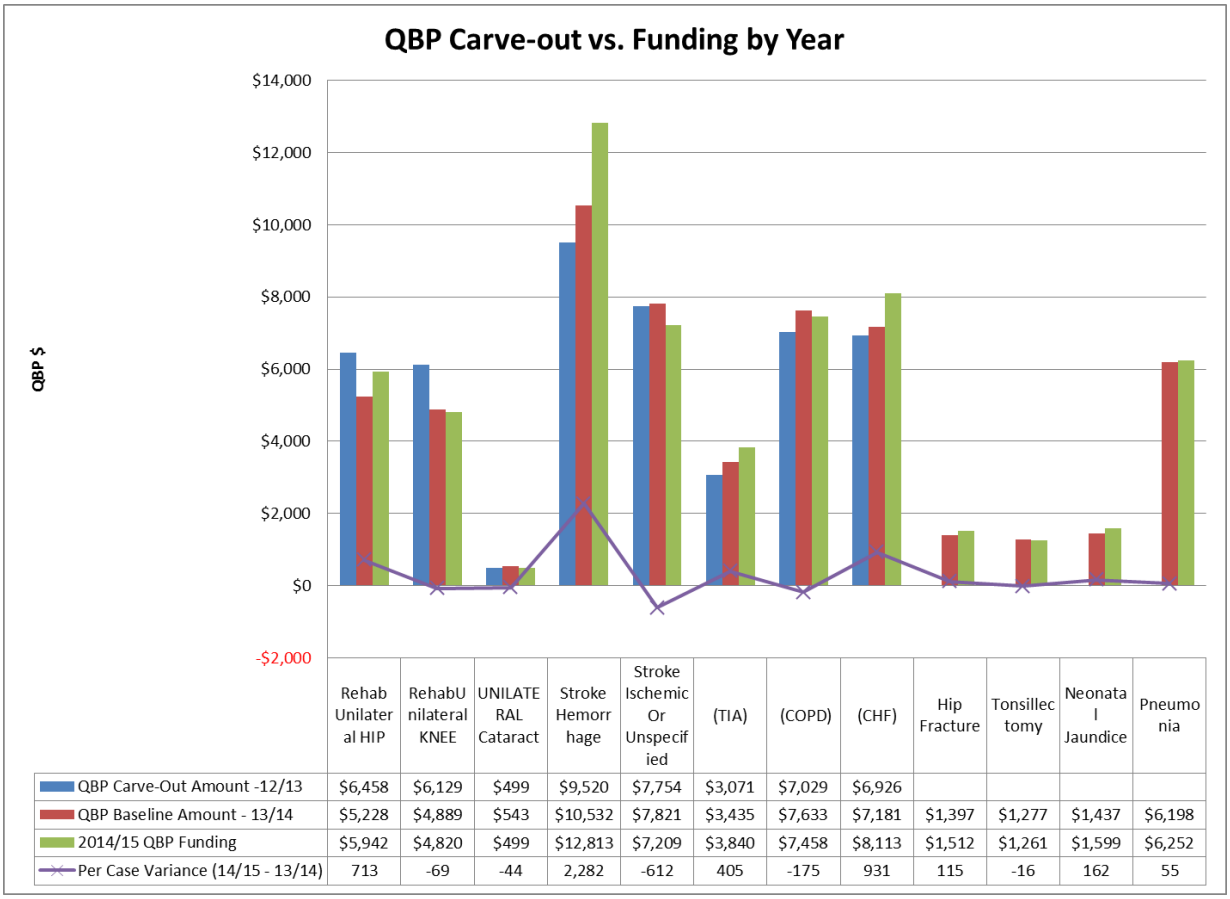


Figure 6: QBP Peer ALO Comparisons FY 13/14

A comparison of QBP funding carve out versus subsequent years QBP funding levels (see Figure 7), shows that funding levels have decrease in some QBPs (i.e. Ischemic/unspecified stroke, COPD, Rehab Knee, and Cataract).



	Rehab Unilateral HIP	RehabUnilateral KNEE	UNILATERAL Cataract	Stroke Hemorrhage	Stroke Ischemic Or Unspecified	(TIA)	(COPD)	(CHF)	Hip Fracture	Tonsillectomy	Neonatal Jaundice	Pneumonia
QBP Carve-Out Amount -12/13	$6,458	$6,129	$499	$9,520	$7,754	$3,071	$7,029	$6,926				
QBP Baseline Amount - 13/14	$5,228	$4,889	$543	$10,532	$7,821	$3,435	$7,633	$7,181	$1,397	$1,277	$1,437	$6,198
2014/15 QBP Funding	$5,942	$4,820	$499	$12,813	$7,209	$3,840	$7,458	$8,113	$1,512	$1,261	$1,599	$6,252
Per Case Variance (14/15 - 13/14)	713	-69	-44	2,282	-612	405	-175	931	115	-16	162	55

Figure 7: QBP Carve-out vs Funding by Year

As outlined above, the Patient Based Funding (PBF) component of the new funding model is based on a series of inpatient and outpatient procedures (i.e. QBPs) for which hospitals will be reimbursed on a "price x volume" basis. In order for hospitals to make a profit, or break-even, on a particular QBP price, they have to ensure that they can provide the service at or below the MOHLTC target price.

The ministry has indicated that future iterations of the QBP model may involve LHINs awarding additional volumes to cost-effective hospitals. Therefore, it becomes strategically important for hospitals to be able to clearly identify which QBPs it is able to sustain at, or below, the ministry target. This requires the use of highly adept case costing structures and staff expertise.

The foundation of HSFR rests on a number of a couple of key factors: the hospital's ability to provide sound clinical outcomes on a cost-efficient basis, and the ability to maximize throughput (or weighted cases) while minimizing the impact on the hospital's overall cost structure.

In order to track hospital performance in these areas, the hospitals of the future are going to need to invest in strong decision support, case costing, finance, and utilization management structures. The information produced by these departments is vital to monitoring hospital performance on HBAM components and is fundamental to determining the actual costs of care delivery. This information is also critical to the creation of new and innovative models of care. Hospitals of the future will need to invest resources (both IT and staff) in these areas to maintain a competitive advantage.

The coaching team would therefore recommend that the hospital assess internal QBP costs vs. MOH price-point and identify those QBPs which require immediate attention. Explore feasibility of QBP micro-costing, where possible and review clinical assignment to unspecified and ischemic stroke QBP. Furthermore, we would recommend that the hospital review the models of care for current and upcoming QBPs and adherence to clinical best practice guidelines.

It is also recommended that NHH obtain formal MOU with PRHC on level and type (QBP vs. non-QBP) of funding being provided to NHH for the satellite dialysis program. The MOH funding allocation files identify dollar amounts related to QBP carve outs for Chemo/GI Endo funding, but no QBP funding is identified in MOH allocation for CKD since those dollars are flowed through PRHC though paymaster accounts. Documentation on how much of this dialysis is QBP vs. non-QBP is lacking.

We would also recommend that the hospital monitor CMI and volumes on a quarterly basis since these will have an impact on future QBP funding flows.

In addition to these QBP specific recommendations, we would also recommend that the hospital seek to:

- Establish a HBAM Steering Committee and QBP working groups with clearly defined deliverables, milestones and reporting frameworks. Both groups should include tri-ad representation from clinical (physician & admin), financial, and decision support functions.

- Access required expertise within and/or outside of LHIN in an expeditious manner

- Develop a quarterly reporting framework for HSFR indices i.e. CPWC, QBP LOS, quality indicators

In should also be noted that a high level data quality audit of the IP DAD was conducted as part of this coaching exercise. In summary, the data quality audit found that the:

- Capture of Flagged Interventions in coded data appears to be robust and comparable (if not slightly higher) than peer hospitals

- Audit of SCU days in comparison to peer group hospitals shows no major issues

- Frequency of "discharge to homecare" also aligned with peer group experience

In summary, no major data quality issues were identified in the inpatient DAD.

6.3 ADDITIONAL ANALYSIS

In addition to the review of HSFR performance, the coaching team also reviewed hospital performance on a series of widely-accepted industry benchmarks. Figure 8 below highlights NHH performance on a select set of performance metrics. Overall, the hospital was aligned with peer group results but was slightly higher in the % of FT nurses, % drugs & supplies, and % medical & NP remuneration.

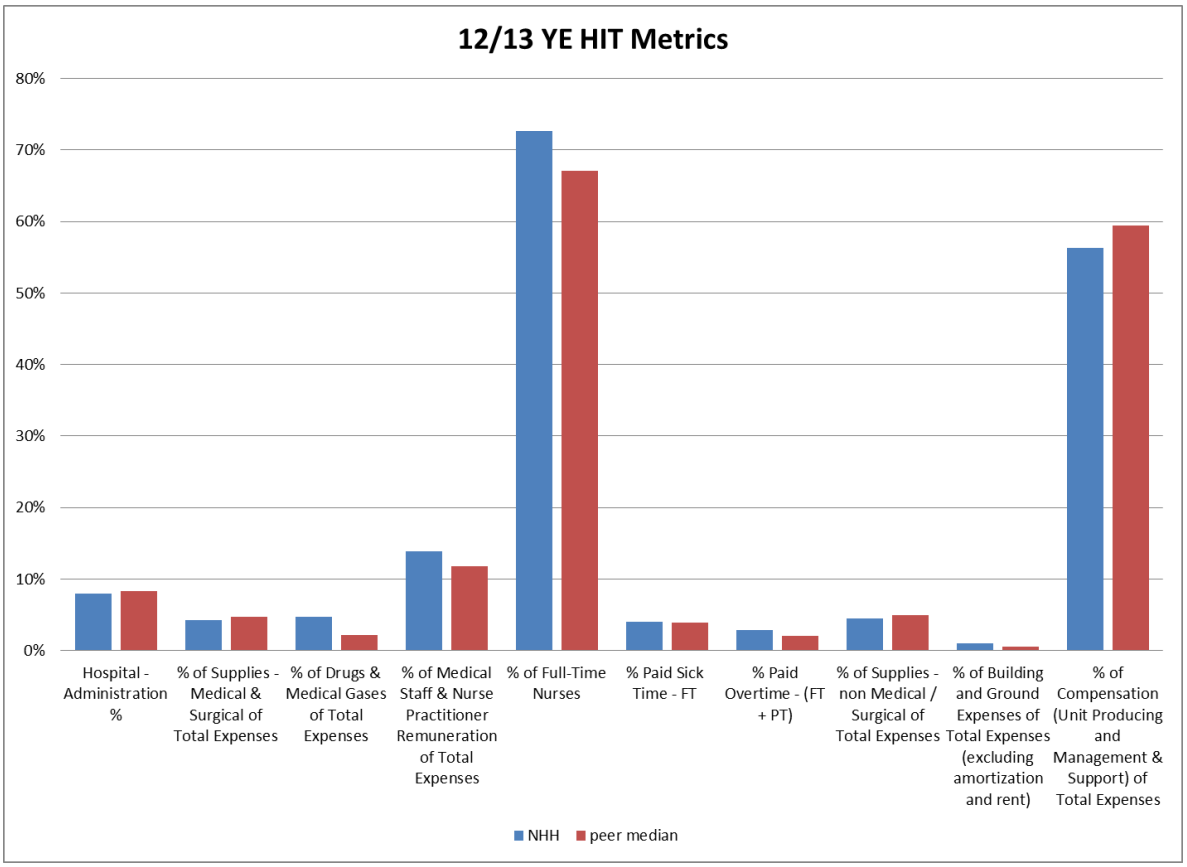


Figure 8: NHH and Peer Comparison of HIT performance metrics

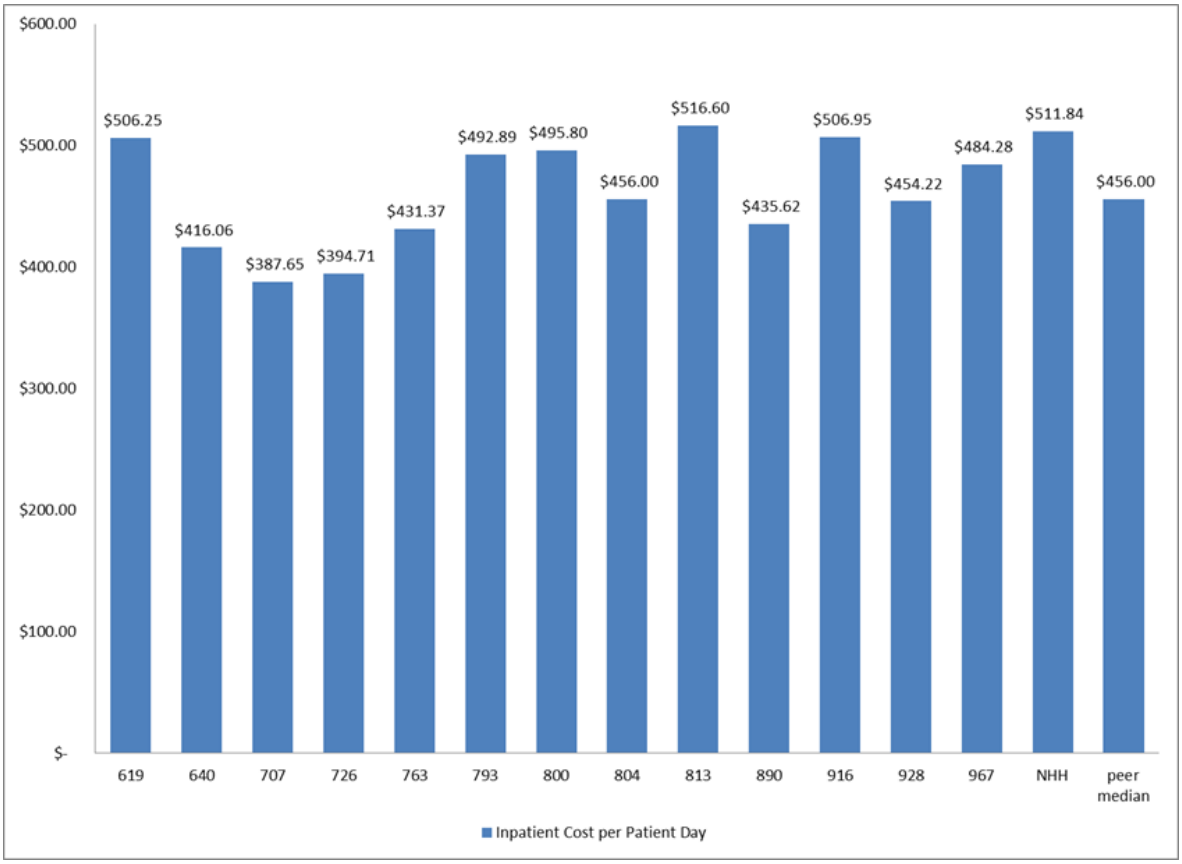


Figure 9: Inpatient Costs Per Patient Day

One measure where the hospital appeared significant higher than the peer median was total inpatient cost per patient day (see Figure 9). This indicator measures the average cost of providing services to one inpatient day.[8] Based on the hospital's performance on these metrics, the coaching team recommends that an in-depth review of staff skill mix and scope of practice be conducted.

6.4 THE LEVEL OF CARE METHODOLOGY – RESULTS

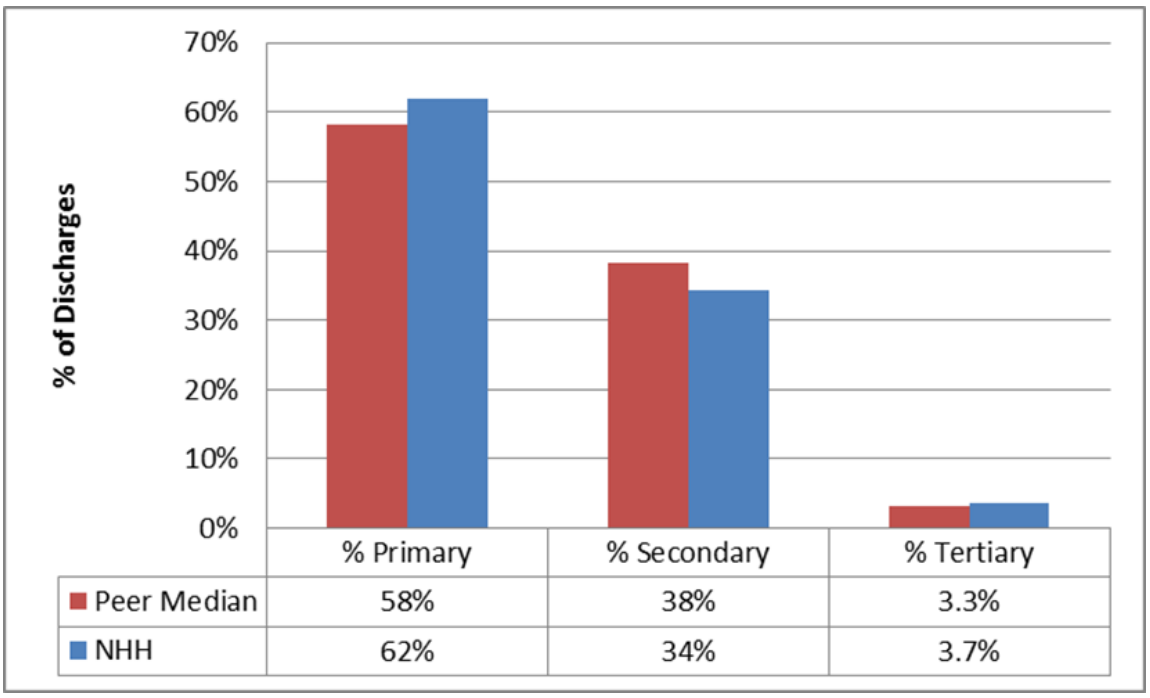
The Level of Care (LOC) Methodology was first developed in the early 1990s by the Hay Group as part of the Metropolitan Toronto District Health Council Hospital Restructuring Project, and was used to rank and assign levels of care to patient groups. A new LOC methodology was subsequently developed by the Ministry, in collaboration with the Ontario Joint Policy and Planning Committee (JPPC), and was approved for use for hospital funding.

[8] Total Operating expenses exclude all interdepartmental expenses and buildings amortization and include internal/external recoveries. Includes compensation, supplies/drugs/plan op (utilities), sundry, equipment, bldg./other expenses

The methodology defines tertiaryness based on concentration of care and indicates how care activities related to a specific patient group are distributed among hospitals or providers. This methodology also takes into account the average hospital tertiaryness, i.e. the overall level of care of the setting in which the cases in a patient group were treated.[9]

In 2012, the Ministry's LOC methodology was enhanced for use in HBAM's acute inpatient and day surgery module. Used as the acute tertiary LOC factor, LOC is one of the cost modifiers used to calculate expected unit cost. This factor is used to estimate impact of having high-cost infrastructure associated with providing specialized acute services and is based on provincial Case Costing Data.

Applying this methodology to NHH's 2013/14 YE results, yield some interesting results, which essentially showed that the hospital has a higher proportion of primary cases, and a lower percentage of secondary cases, in comparison to the peer median (see Figure 10).



	% Primary	% Secondary	% Tertiary
Peer Median	58%	38%	3.3%
NHH	62%	34%	3.7%

Figure 10: Percent Primary, Secondary and Tertiary Cases

Further analysis into the top 20 HIGs (based on length of stay or patient days) revealed that the hospital has a high volume of non-acute activity i.e. palliative care, convalescence, and dementia (see Table 8).

[9] MOH, HSMI Level of Care Methodology Report, January 2014

No.	HIG	HIG Descriptions	IP Cases	Acute LOS	ALC LOS	Total LOS
1	810	Palliative Care	212	1934	3	1937
2	670	Dementia	49	487	476	963
3	139b	COPD	125	905	17	922
4	196	Heart Failure wo Cor Angio	104	762	19	781
5	138	Viral/Unspecified Pneumonia	128	723	18	741
6	139a	Chronic Bronchitis	108	625	6	631
7	806	Convalescence	99	349	156	505
8	487	Lower Urinary Tract Infect	78	432	2	434
9	202	Arrhythmia wo Cor Angio	92	407	5	412
10	576	Normal Newborn Sing Vag Deliv	249	395	0	395
11	405	Cellulitis	49	369	25	394
12	26	Ischemic Event of CNS	63	321	30	351
13	248	Severe Enteritis	44	335	14	349
14	254	Gastrointestinal Hemorrhage	58	256	86	342
15	577	Normal NB Mult/C-Sect Deliv	127	323	0	323
16	477	Renal Failure	46	315	6	321
17	255	Gastrointestinal Obstruction	61	281	6	287
18	221	Colostomy/Enterostomy	20	272	11	283
19	654	Other/Unspecified Sepsis	40	268	5	273
20	257	Symptom/Sign Digestive System	63	256	2	258
	Grand Total		4,200	19,735	1,296	21,035

Table 8: NHH Top 20 HIGs

These high volume, non-acute patients, need to be assessed for their appropriateness as inpatients at NHH. This being said, the removal of these volumes will require a strategic approach to enhance appropriate volumes for acute inpatient care through strategic clinical integration process.

7.0 CLINICAL/OPERATIONAL FINDINGS

7.1 MODEL OF CARE/SKILL MIX REDESIGN

Building on the findings identified in the LOC Methodology articulated above, NHH has several challenges supported by the fact that the clinical activity suggests that the organization has a less acute profile than its peers and that there is a relatively high volume of non-acute activity i.e. palliative care, convalescence, dementia. These results coupled with the relatively high cost per patient day and high FT Nursing ratios in comparison to peers suggest that an initial review be conducted on skill mix and scope of practice.

The previously articulated recommendation surrounding the need to redesign models of care which will support efficient and effective care processes and it will assist in addressing the skill mix and scope of practice review. All of this work will ensure achievement of ministry price points.

With the establishment of the recommended HBAM Steering Committee (SC) and QBP working groups, skill mix redesign can occur to support these new models of care.

7.2 Geographic efficiencies

During our review it was identified that many units are small and require innovative approaches to integrate services between units to gain efficiencies. The need to integrate services coupled with a review of RN/RPN mix is needed to support the realignment of inpatient costs.

7.3 Partners In Care

With the Redesign of the Models of Care, substantial realignment of pre-hospital and post-hospital care is required. This will require the CCAC and other community partners to be involved in the model of care redesign. It is recommended that a LHIN supported (NHH Healthcare Partners Table) committee be set up to support the development of processes/programs to ensure that innovative approaches to keeping patients in the community need to continue to be supported and redesigned as well as actively supporting the outflow of patients discharged from the hospital setting (these strategies will support ED flow and Surge issues being faced by NHH).

7.4 Strategic Organizational Positioning

NHH needs to approach its care process redesign through a short term, immediate stabilization approach followed by a longer term approach.

First, NHH must define a Short Term Vision for the organization. This recommendation will support the organization in articulating its short term state while it works through its stabilization stage (first 2 years of this organizational realignment). This stabilization stage will see the development of a cogent strategic step wise plan to deal with the current financial crisis; build and operationalize the recommended financial strategy; realign care services- divest /move out services that can be done in the community-i.e. Convalescent care, Palliative care etc. To measure the outcomes that need to be supported as part of the Strategic vision a Balanced Score Card approach to the roll out of corporate strategy needs to be instituted.

Following the Short Term Vision development there is a need to develop a long term vision for sustainability.

Long Term Vision: "Refined Vision" as an acute care hospital. This long term Vision will require development of greater partnerships and integration strategies with larger health care organizations.

The development of a longer tem vision requires the board to picture the development of a strong vibrant acute care future for NHH. As part of this strategic process the CEO and Board Chair need to begin the discussions with larger hospitals to support the development of substantive integration/partnership arrangements to ensure the sustainability of the organization into the future.

7.5 Corporate Capacity

This intensive process of organizational realignment will require the development of sound strategies to stave off and proactively address the Administration/Leadership turnover and vacant positions that have plagued the organization over the last year. Substantial strides have been made to address these issues however to be able to position the organization for the future sound consistent leadership must be present. As well, it is recommended that an additional interim senior leadership position be hired to support the strategic realignment of the recommendations identified throughout the report.

Capacity development strategies are also needed within all corporate functions to support knowledge translation and ensure that robust funding and ministry data requirements are met to prevent NHH from always trying to do catch-up as it relates to Quality Based Procedures and redesigned models of care. Strategic linkages with other organizations to support the decision support department at NHH is required.

8.0 SUMMARY

NHH has much work to do to stabilize its financial position. The need to hit the ground running and develop immediate strategies to obtain financial support from the Central East LHIN is imperative. Internal processes and practices surrounding obtaining and developing funding expertise and identifying ways to realign services and process to support a change in care redistribution in pre and post hospital care is necessary. Discussion surrounding changes in practice with the CCAC is required.

NHH cannot go it alone. It requires much needed stabilization funding to allow the organization to redesign and realign its services. It is imperative that clinical/operational integration initiatives be search out all of which need to support the boards realigned short and long term vision for NHH- A Refined Vision- as an acute care hospital serving the residents of Northumberland County and beyond.

The recommendations that have been made in this report are summarized as follows:

<u>Financial</u>

1. NHH will not be able to balance its budget in the next 3 years, thus transition dollars are required to support NHH as it deals with its organizational and financial realignment.
2. Enhance financial planning by developing multiyear projections of operations, financial position and cash flow.
3. Enhance financial information and analysis provided to the senior management team, the Audit and Finance Committee and the Board through alternate methods such as: by business line and funding type.
4. Develop more robust financial impact analysis on the projected impact of new or replacement physicians working at the hospital.
5. Ensure that operating budget projections adequately identify all activities and initiatives e.g. surge, patient transports and float pool.

<u>HBAM</u>

6. Carry out a detailed review of OCDM and alignment with reporting rules for 13/14 and 14/15.
7. Pursue discussions with key stakeholders (i.e. LHIN/MOH) on incorporating appropriate one-time funding streams in to global base.
8. NHH to obtain formal MOU with PRHC on level and type (QBP vs. non-QBP) of funding being provided to NHH for satellite dialysis.
    - QBP carve outs include Chemo/GI Endo funding, but no QBP funding identified in MOH allocation for CKD - yet paymaster accounts show we receive $1,879M from PRHC for Dialysis. Documentation on how much of this dialysis is QBP vs. non-QBP is lacking.
9. NHH to conduct a detailed review of costs contributing to higher than expected ER HBAM cost per unit.

QBP

10. Assess internal QBP costs vs. MOH price-point and identify those QBPs which require immediate attention. Explore feasibility of QBP micro-costing, where possible.
11. Review models of care for current and upcoming QBPs and adherence to clinical best practice guidelines.
12. Monitor CMI and volumes on a quarterly basis since these will have an impact on future QBP funding flows.

HSFR

13. Establishment of HBAM SC and QBP working groups with clearly defined deliverables, milestones and reporting frameworks.
14. Develop immediate partnerships to HSFR expertise within and outside of LHIN.
15. Quarterly reporting framework for HSFR indices i.e. CPWC, QBP LOS, quality indicators.

Clinical /Operations

16. Review skill mix and scope of practice in all clinical areas.
17. Geographically realign patients to support innovative integration of services between units to gain efficiencies.
18. Realign pre-hospital and post-hospital care through the development of a LHIN supported committee.
19. Define short term vision for the organization.
    First 2 years- stabilization stage
    - Development of a cogent strategic step wise plan to deal with current financial crisis
        - » Build and operationalize the recommended financial strategy
        - » Realign care services- divest /move out services that can be done in the community- i.e. Convalescent care, Palliative care etc.
        - » Ensure Strategic Vision is supported through the use of a Balanced Score Card approach to the roll out of corporate strategy.

Administrative

20. Develop strategies to proactively address the Administration/Leadership turnover and vacant positions.
21. Design capacity development strategies for Knowledge Translation and financial/decision support decision making.

Long Term – Integration Strategy

1. Develop Long Term Vision for the future
2. "Refined Vision" as an acute care hospital → requiring greater partnerships and integration.

APPENDICIES

Appendix A

List of Interviews

Role	Name of Individual(s)	Date
CEO	Linda Davis	December 8, 2014
Vice President, Patient Services and Chief Nursing Executive	Helen Brenner	December 8
VP Finance and IT	Cheryl Turk	December 10
Director, IT	Mike Donoghue,	December 10
Manager, Application Systems	Carole Thomson	December 10
Manager, Materials Management	Charity Meiklejohn	December 10
Specialist Decision Support	Cyndee Kelsey	December 10
President, Medical Staff Association	Dr. Mukesh Bhargava	December 12
Chief of Staff	Dr. David Broderick	December 12
Program Directors	Anne Marie Sutherland Tab Carole Mia Allen Bev Adamson Ian Moffat	December 12

Role	Name of Individual(s)	Date
Chief, Surgery	Dr. Andrew Stratford	December 12
VP Human Resources	Elizabeth Vosburgh	December 12
Board Chair	Jack Russell	December 15
Chair, Finance and Audit Committee	Bill Gerber	December 15
Board Vice Chair	John Hudson	December 15
Chief, Family Medicine	Dr. Kirk Haunts	December 16
Lead Hospitalist, Department Chief, Hospitalist Program	Dr. Jeff Knackstedt	December 16
Chief Emergency Department	Dr. Francesco Mulé	December 16
Department Chief, Post Acute Specialty Services	Dr. Jay Amin	December 18, 2014
Central East LHIN Administrative Staff	Deborah Hammons, James Meloche, Stewart Sutley	January 5, 2015

Appendix B

Changes in Cash Position and Cumulative Operating Results
Past 5 years (April 2009-March 2014)
in 000's

CASH POSITION	
Cash position - April 1, 2009	4,101
Cash position - March 31, 2014	(770)
Change in cash position	(4,871)

OPERATING RESULTS
Cumulative operating deficit from April 2009 to March 2014 was (2,089).

Key components of the cash position change				Key components
Surplus before RC, WCR and LTI			35	35
Restructuring costs (RC)			(2,248)	(2,248)
Long term debt payments, including long term interest (LTI)			(1,858)	(299)
Net Changes in non-cash current assets and liabilities	Note 1		(1,627)	
Capital				
Capital Investments		(9,426)		
Capital Investment Funding Sources	Note 2	8,961	(465)	
Employee Future Benefits				
Amounts expensed		2,214		
Amounts paid		(1,345)	869	
Working Capital Remedy Funding (WCR)			423	423
Change in cash position			(4,871)	(2,089)

Note 1

Net Changes in non-cash current assets and liabilities:

Increase in Accounts receivable	-	1,348
Reduction in Inventory		120
Increase in Prepaid expenses	-	467
Reduction in Accounts payable and accrued liabilities	-	1,050
	-	2,745
Net depreciation		1,118
	-	1,627

Note 2

Capital Investment Funding Sources

Foundation and other Funding Sources	8,849
Proceeds on sale of assets	112
	8,961

Appendix C

Basic Financial Assumptions

The 2015-16 Operating Position is based on the hospital's preliminary plan, adjusted for:

- Deferred grant amortization and capital asset depreciation,
- Operating Investments,
- Short and long-term interest expense,
- Operational efficiency savings,
- Restructuring costs, and
- Transitional funding of restructuring costs & certain Operating Investments.

The 2016-2018 fiscal year operating plans are based on the 2015-16 planned operating position.

Revenue

- Revenue is based on the 2015-16 preliminary plan adjusted for deferred grant amortization.
- Operational funding for 2016-2018 is the same as in 2015-16.
- No further Working Capital Relief Funding.
- Transitional funding of restructuring costs & certain Operating Investments.

Inflation

- Salaries and Wages- 1.0% to 1.4% per year, plus pay equity provision for selected employee categories.
- Supplies – 1.0% to 1.5% per year.

Operating Investments

Provisions have been included for:

- Clinical Information System
- Model of care redesign support
- Leadership capacity to support the transition – (one time)
- Decision support and financial analyst support

Capital Expenditures

- Reflect the hospital's 5 year capital plan
- Capital expenditures continue to equal available funding (from Foundation, etc.). The financial model will need to be adjusted to mirror available funding.
- CIS investment assumes the hospitals funding methodology as per the November 2014 LHIN CIS Financing Survey – (Fdn. – 40%, LHIN – 40% & hospital borrowing – 20%)

- Hospital borrowings – loan amortization period – 7years, at approx. 4%
- Capital asset depreciation commences in the month of acquisition. Assets are assumed to be acquired equally over the year, thus capital asset amortization is approximately 50% of annual depreciation in the year of acquisition.

Operating Efficiency Savings

- Options have been developed that reflect $1M and $2M in savings
- Savings as a % of HCM best quartile are between 13% and 26%
- HCM savings experience is between 30% and 40%
- Savings are phased equally over 2 years.
- 2015-16 savings realization commence October 2015. Initiatives ready by April1, 2015.
- 2016-17 savings initiatives are identified in sufficient time to be realized by April 2016. (Any notice to be given by September 30, 2015).

Restructuring Costs

- Costs are reflect collective agreement provisions for severance and early retirement – ONA – up to 35 weeks, CUPE & OPESU – 52 weeks.
- Costs have been developed based on an average 44 weeks for all employee categories and average hospital employee total compensation.

Other

- The hospital does not generate any substantial net depreciation to fund working capital as most assets have been externally funded.
- Working capital improvements can only be achieved through operating surpluses.
- Payroll accrual has been adjusted to reflect the appropriate YE days.
- Pay equity liability is settled.

Appendix D

Northumberland Hills Hospital
Financial Position - Summary — Model: $ 2.0 million in annualized savings
000's

Year ended March 31	2018	2017	2016	2015	2015	2015	2014	2013	2012	2011	2010	Total
Description	Fcst	Fcst	Fcst	YTD	Budget	Forecast	Actual	Actual	Actual	Actual	Actual	Actual
				Oct. 2014								
Cash position, net	-3,857	-2,523	-1,899	-2,298		-1,104	-770	-304	-54	377	415	-770
Working Capital	-7,663	-5,864	-5,755	-5,605		-5,374	-5,628	-5,701	-4,633	-5,227	-5,546	-5,628
Current Ratio (current assets/current liabilities)	0.019	0.197	0.261	0.452		0.427	0.497	0.487	0.536	0.458	0.444	0.497
Capital Assets, net	53,624	51,099	51,361	50,547		51,306	52,577	53,314	56,564	58,554	61,671	52,577
Deferred Capital Contributions	50,979	48,814	49,287	48,882		49,144	50,345	51,252	54,489	56,304	58,149	50,345
Long Term Debt (LTD), current and long term	359	412	60	333		183	538	878	1,203	1,513	1,812	538
Other Long Term Liabilities (Employee Future Benefits)	4,822	4,516	4,210	3,730		3,904	3,730	3,568	3,556	3,437	2,436	3,730
Net Assets/(Deficit)	- 10,144	- 8,500	- 7,951	- 7,670		- 7,116	- 7,309	- 7,745	- 6,992	- 7,616	- 5,974	- 7,309
Corporate Surplus/(Deficit)												
Total Surplus/ (Deficit), before LTD interest payments & WCR	-1,628	290	3	-348	612	209	246	-269	581	-186	-337	35
Restructuring Costs	0	-837	-837				-200	-438	103	485	-2,198	-2,248
Working Capital Remedy Funding						0	423					423
LTD - interest payments	-17	-2	-1	-12		-17	-32	-46	-60	-74	-87	-299
Total Surplus/ (Deficit)	-1,645	-549	-835	-360	612	192	437	-753	624	225	-2,622	-2,089
Other non-cash operating amounts	306	306	306	102		433	411	403	427	544	429	2,214
Net Cash flow from operations	**-1,339**	**-243**	**-529**	**-258**		**625**	**848**	**-350**	**1,051**	**769**	**-2,193**	**125**
Expenditures												
LTD - principal repayment	53	8	183	205		355	340	325	311	298	285	1,559
Capital investments	6,657	3,978	4,125	262		2,551	2,780	1,397	2,433	1,433	1,383	9,426
Total Capital Expenditures	**6,710**	**3,986**	**4,308**	**467**	**0**	**2,906**	**3,120**	**1,722**	**2,744**	**1,731**	**1,668**	**10,985**
All other Expenditures - post retirement benefits	0	0	0	0		258	259	265	304	274	243	1,345
Total Expenditures	**6,710**	**3,986**	**4,308**	**467**	**0**	**3,164**	**3,379**	**1,987**	**3,048**	**2,005**	**1,911**	**12,330**
Sources of Funds												
Net amortization and depreciation	40	150	148	316		145	220	222	238	149	289	1,118
Additional long term debt	0	360	60									
Capital contributions	6,257	3,618	4,065	509		2,477	2,405	1,202	2,370	1,315	1,557	8,849
Proceeds from sale of capital assets	0	0	0	4		0	0	-17	4	125	0	112
Sub - total	**6,297**	**4,128**	**4,273**	**829**	**0**	**2,622**	**2,625**	**1,407**	**2,612**	**1,589**	**1,846**	**10,079**
Net changes in non-cash working capital	419	-524	-231	-1,630		-416	-561	681	-1,045	-392	-1,428	-2,745
Total Sources of Funds	**6,715**	**3,604**	**4,042**	**-801**	**0**	**2,207**	**2,064**	**2,088**	**1,567**	**1,197**	**418**	**7,334**
Opening Cash Position	-2,522	-1,898	-1,103	-770		-770	-304	-54	377	415	4,101	4,101
Change in funds	-1,333	-625	-795	-1,526		-333	-467	-249	-430	-39	-3,686	-4,871
Ending Cash Position	**-3,856**	**-2,522**	**-1,898**	**-2,296**	**0**	**-1,103**	**-771**	**-303**	**-53**	**376**	**415**	**-770**