Section II
Executive Summary – UNCH

- **Top Ten Recommendations – UNCH**
- **Situation Analysis**
- **Summary of Important Recommendations**
- **Financial Model**
- **Keys to Success**

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Top Ten Recommendations – UNCH

1. **Achieve expense saving opportunities in:**
   - Supplies of approximately $6.5M in clinical and non-clinical areas.
   - Pharmacy of approximately $5.8M in I/P and O/P expense reductions.
   - Clinical Resource Management: LOS I/P day reductions to create an opportunity for new admissions.

     [Portions of the Recommendation are confidential and have been redacted.]
2. **Increase admissions by improving capacity management and throughput.**
   - Focus on improving case management, bed control, nursing, ancillary and ED processes.
   - Increase admissions by approximately 1,500.
   - Improve patient level of care placement and observation to I/P conversion rates.
3. **Improve operation of key services that are vital to increasing admissions and revenue.**
   - OR utilization, block usage, release times and turnover of rooms.
   - ED treat and release times, left without being treated rates and time to admission.
   - Anesthesia staffing improvements to stabilize financial position of the department.
     - Transition CRNAs to become the responsibility of UNC P&A.
   - Hospitalist service to improve management of I/P cases.

Top Ten Recommendations – UNCH

4. **Create availability in key areas, such as surgical beds, ICUs and ORs in order to increase referrals, especially surgical referrals.**
   - Strategically identify programs and geographic locations for targeted growth.
   - Identify strategies for improving margins on high growth opportunity service lines, such as Gastroenterology, Orthopedics and Neurosurgery.
5. **Adopt the proposed management organization chart.**
   - Create a management position of Inpatient Medical Officer responsible for cost and quality of care.
   - Eliminate matrix management.
6. **Adopt proposed mission-based payment recommendations from hospital to departments.**
7. **Improve all pre-arrival, registration and financial counseling processes.**
   - Develop a Centralized Pre-Arrival Unit with the following responsibilities:
     - Contact defined non-emergent patient population.
     - Verify insurance eligibility and benefits. Obtain all necessary pre-certifications and authorizations.
     - Establish up-front time-of-service payment expectation with patient.
   - Develop extensive Patient Access Data Quality Improvement initiative including:
     - Creating comprehensive registration data quality training program.
     - Holding Patient Access Managers and Registration staff accountable to ensure data quality targets.

Top Ten Recommendations – UNCH

The three remaining recommendations (numbered 8, 9, and 10) are confidential and have been redacted.

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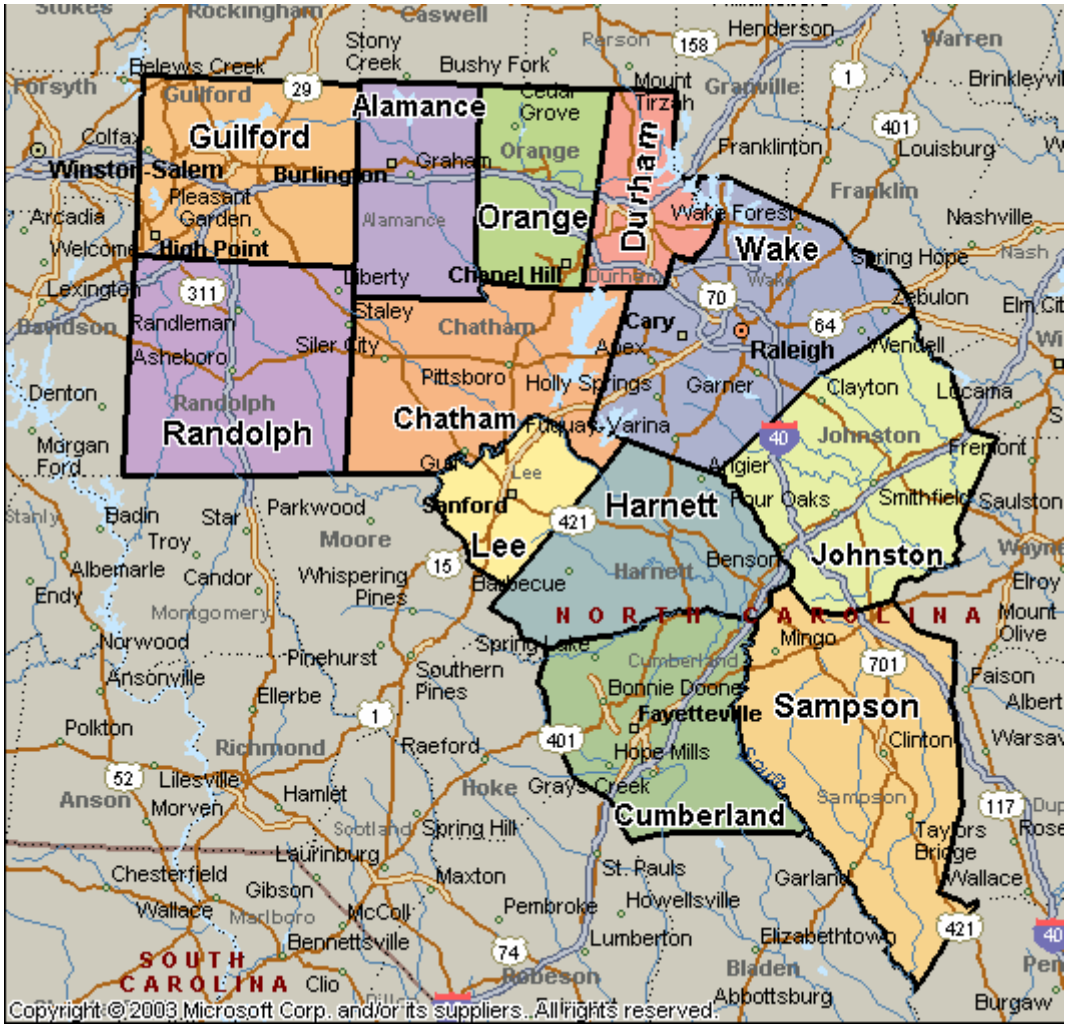
Situation – UNCH Market



- **Primary Service Area (PSA) includes the counties of:**
  - Alamance
  - Orange
  - Chatham
  - Lee
- **Secondary Service Area (SSA) includes the counties of:**
  - Guilford
  - Randolph
  - Durham
  - Wake
  - Harnett
  - Johnston
  - Cumberland
  - Sampson

[Portions of the Market information are confidential and have been redacted.]

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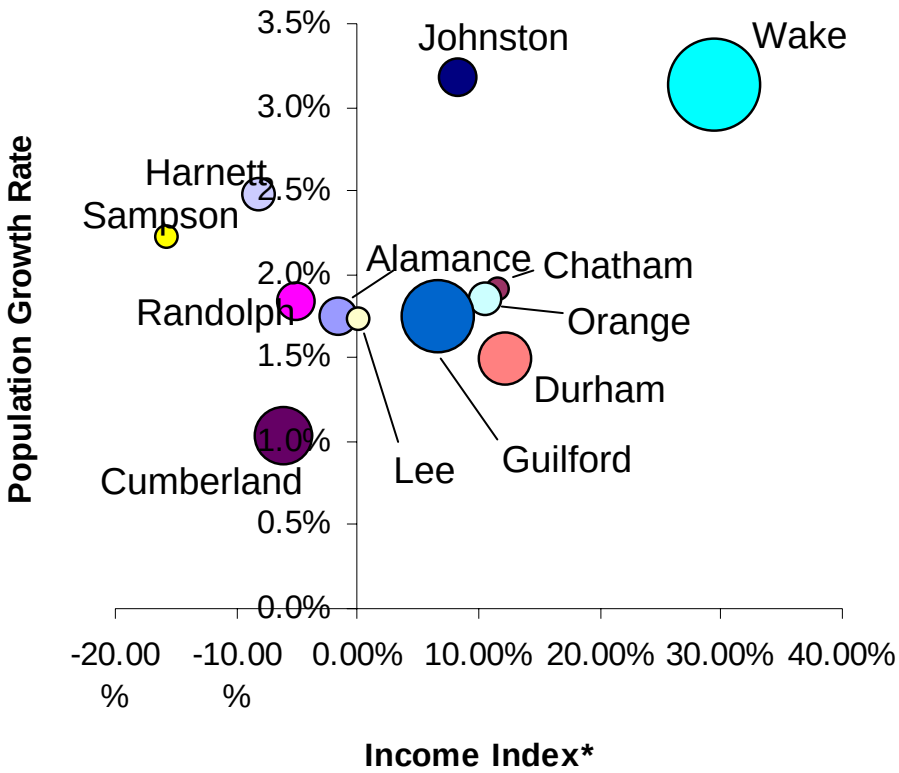
Situation – UNCH Market



Source: NC State Office of Budget and Management (Population) & Claritas (Median Household Income)

- The four zip codes in UNCH's PSA represent relatively average growth rates and income levels, but lower than average total population.

Service Area	County	2003 Population	Annual Population Growth Rate
Secondary	Wake	699,197	3.1%
Secondary	Guilford	431,086	1.7%
Secondary	Cumberland	307,916	1.0%
Secondary	Durham	236,036	1.5%
Primary	***Alamance***	***136,445***	***1.7%***
Secondary	Johnston	136,298	3.2%
Secondary	Randolph	134,932	1.8%
Primary	***Orange***	***120,916***	***1.8%***
Secondary	Harnett	97,852	2.5%
Secondary	Sampson	62,238	2.2%
Primary	***Chatham***	***53,618***	***1.9%***
Primary	***Lee***	***49,750***	***1.7%***

* Income index is calculated as the percentage of households with >$50K income, less the percentage of households with $15K-$50K income.

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Situation – UNCH Organization and Management

Assessment

- Various roles and responsibilities of key executives differ from NCI experience with comparable clients.
- There is no true Chief Medical Officer (CMO) position. There is a Chief of Staff position, which is filled by an MD, but it is, in effect, an advisory/regulatory position. With most clients, the Chief of Staff position is elected by the Medical Staff.
- The Care Management structure is disjointed and split between the Hospital President, the CFO and the SR VP for Professional and Support Services.
  - Until recently, there was a VP responsible for Performance Improvement.
  - In most institutions, Care Management reports to the CMO.
- The CNO is responsible for patient care practices throughout the system, yet responsibilities for various patient care units or services are diffused due to the existence of a service line model.
  - The service line model was designed to develop a multi-disciplinary approach to building key services working with the School of Medicine (SOM) departments and the hospital.
  - The objective was to accomplish this task without developing a confusing and costly matrix organization. Matrix reporting relationship occurs primarily in hospital-based clinics; JCAHO requirement for nursing practices.
  - Administrative and Clinical Director positions report to a SR VP of Professional and Support Services. The Administrative Director has a solid line reporting relationship and the Clinical Director has a dotted line reporting relationship. The Clinical Director has a straight line reporting relationship to the CNO.

Situation – UNCH Organization and Management

Assessment

- The VP of Surgical Services does not report to the CNO, but rather directly to the COO.
- There are three SR VPs for Support and Professional Services.
  - These three positions are a responsible for services which are, in most other client situations, distinctly separated along professional and support service lines.
  - SR VPs for Support and Professional Services also have responsibility for various hospital-based clinics.
    - With one SR VP having responsibility for most, but not all of these clinics.

Situation – UNCH Organization and Management

Assessment

- UNCH had approximately 5,051 paid FTEs in Jun 2004, including contract and agency employees and excluding residents.
- UNCH had approximately 320.8 paid management FTEs, with an employee-to-manager ratio of approximately 15.8 to 1, which is lower than better performing academic medical centers. Senior management estimated the percent time managers and supervisors devoted to management.
  - NCI recommends a ratio no less than 17.5 to 1 for academic medical centers.
- The following table indicates the number of management FTEs by management layer:

Level of Management	Number of Management FTEs
CEO,COO, SVPs	11.0
VPs	5.0
Clinical Directors, Administrative Directors	9.0
Directors	62.3
Managers	144.9
Supervisors	88.6
Total	**320.8**

Situation – UNCH Labor Expense/Productivity

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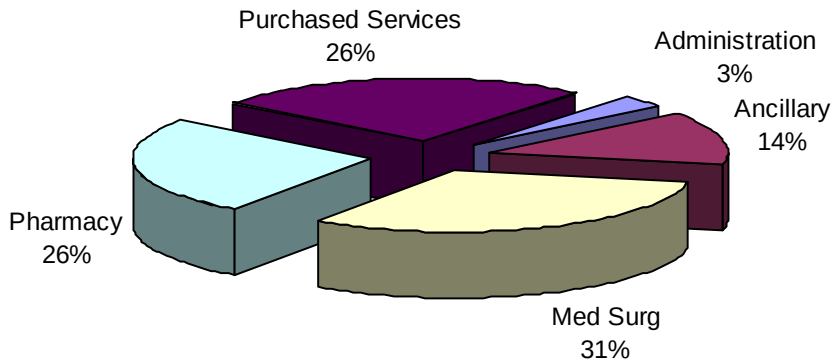
Situation – UNCH Patient Care Services

Assessment

- Overall RN turnover is below national average:
  - National turnover rates in 2002 were 21%.
  - High % of new graduates.
    - Turnover tends to occur in < 2 years.
- Vacancy rate tracks with national average:
  - National vacancy rates average >10%.
  - Navigant client experiences range from 2% to 25%.
- There is no one simple accurate system to track turnover and vacancy rates.
  - Both Human Resources and Nursing Recruitment create reports.
- Numerous recruitment and retention programs are in place to reduce rates.
  - Salaries are competitive, however, philosophy is not to be local market leader.
  - Residency programs, retention surveys and professional development is encouraged, such as research and publishing.
  - Scholarship program initiated in 2001: Cost = $5.5M to date.
  - Retention bonus for all qualified RNs determined annually. 2004-2005 cost estimated at $1.9M.
- There is inadequate “flexible” staff to support unplanned staffing needs due to vacancies, FMLA or increased acuity.
- Overtime usage is high at 3.9%.

Situation – UNCH Supply Chain

CATEGORY	SUBCATEGORY		Dollars
Med Surg			
	Supplies	$	28,950,805
	Prosthetics	$	10,714,154
	Transplant	$	4,716,496
	IV Supplies	$	2,957,537
	Suture and Closure	$	2,345,458
	Endo Supplies	$	494,555
	Instruments	$	183,000
	Misc Med Surg Sup.	$	(419)
	RX Supplies	$	(6,804)
Med Surg Total		$	50,354,782
Purchased Services			
	Contracted Services	$	27,695,253
	Maintenance	$	8,436,512
	Telecommunications	$	3,092,209
	Postage / Freight	$	837,324
	Transportation	$	710,567
	IS Services	$	518,617
	Processing	$	488,901
	Misc. Purchased Services	$	78,876
Purchased Services Total		$	41,858,259
Pharmacy			
	Drugs	$	33,981,754
	Blood	$	7,750,989
Pharmacy Total		$	41,732,743
Ancillary			
	Misc Ancillary Sup.	$	10,686,900
	Minor Equipment	$	7,380,034
	Supplies	$	2,275,596
	Laundry / Linen	$	1,534,223
	Maintenance Supplies	$	893,611
	Radiology	$	187,915
	Janitorial	$	79,790
	Dietary	$	61,078
	Environmental Sup.	$	50
Ancillary Total		$	23,099,197
Administration			
	Office Supplies	$	3,281,900
	Computer	$	835,411
	Postage / Freight	$	578,780
	Education	$	188,133
	Communications	$	135,961
Administration Total		$	5,020,185
Grand Total		$	162,065,166



Scope of Spend

Spend segregated from
FY03 General Ledger for UNCH*

Includes non-labor expenses excluding:

- Physician Fees
- Depreciation
- Interest
- Insurance
- Inventory Adjustments

Scope of Supply / Service Spend = $162,065,166

*Includes ACC and MDNC Clinics

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Situation – UNCH

The following pages are confidential and have been redacted:

- Situation – UNCH Supply Chain Summary of Savings Opportunities
- Situation – UNCH Pharmacy Summary of Savings Opportunities
- Situation – UNCH Operating Room
- Situation – UNCH Anesthesia Services

Situation – UNCH Information Systems

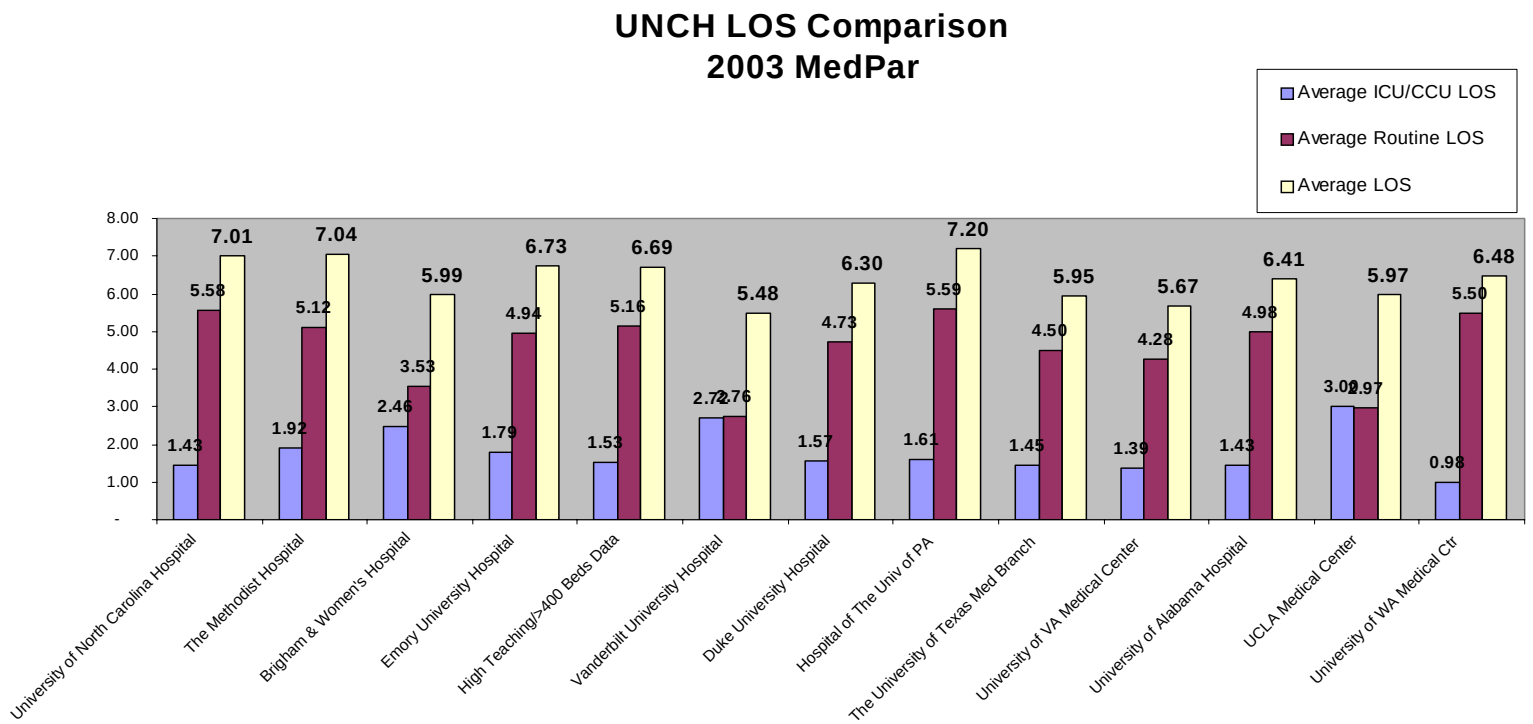
Assessment

- The UNC Hospitals have started to consolidate the various IT organizations to reduce cost through economies of scale.
  - Recently, lab and nursing informatics IT resources were merged into UNC Hospitals IT organization (ISD) with a net annual cost reduction of $561K in FY06.
  - Consolidation discussions are actively underway in other areas, e.g., pharmacy.
- There are also active discussions between UNC Hospitals and UNC P&A about consolidating UNC P&A IT support into the UNC Hospitals ISD.
- Currently, UNC Hospitals' staffing with 121.5 FTEs (based on worked hours for fourth quarter of FY04) is on par with peer organizations when comparing based on "number of users supported" (i.e., 11,710) versus adjusted discharges.
  - (Note: Adjusted discharges account for hospital-related support activities but do not support activities for all Webcis users, the SOM, and UNC P&A).
- The ISD is organized by function, and the CIO and most of his direct reports have a tenure with UNC of 10 or more years. Based on interview results and the availability of IT-related management reports, the department is functioning effectively and is highly respected by the organization. The skills of the individuals in ISD are current.
- IT expense as a percentage of operating expense for UNC Hospitals and UNC P&A is currently estimated to be consistent with NCI benchmarks for UNC Hospitals (3%) and below NCI benchmarks for UNC P&A (i.e., 1% versus a benchmark of 1.62%).

Situation – UNCH Clinical Resource Management (CRM)

Assessment

- NCI compared UNCHS' Medicare patients against peer facilities on LOS both ICU and routine.
- UNC Medicare LOS is slightly longer than many in their compare group, including Duke University Hospital (not CMI adjusted).



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Situation – UNCH CRM
Internal Variation Analysis: Surgical Cases

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Situation – UNCH CRM

Assessment

- Total CRM Opportunity
  - Internal Variation Total: Surgical Cases = $659K
  - External Variation Total: Medical Cases = $1.32M
  - Total Opportunity = $1.98M
  - Total Day Opportunity = 5,657
- Back Fill Opportunity
  - If the beds made available were backfilled with other admissions, there are significant additional revenue opportunities.
- I/P Medical Services
  - There are two general medicine teams consisting of one attending, one resident and two interns.
    - Attendings on the two teams can vary in I/P capabilities due to their predominant involvement in missions other than clinical.
      - There is limited continuity of service on the two teams with usual length-of-duty of two weeks.
      - Overall I/P service times vary from 1 weeks to 12 weeks per year.
  - A Resident physician, usually a chief resident, is responsible to assist the ED with medical admissions. Often take control of the patient in ED prior to patient going to a floor bed.

Situation – UNCH Capacity Management/Patient Throughput

Assessment

- Workarounds for patient placement results in off-service patients on many units throughout the hospital, e.g., dialysis patient will be on a general medical floor.
- Lack of a consistent message for patient throughput, particularly as it relates to a discharge process and an official “discharge time.”
- No sense of urgency for discharging patients early in the day.
- Rounding practices do not support an early patient discharge.

[Portions of the Assessment are confidential and have been redacted.}

Situation – UNCH

The following pages are confidential and have been redacted:

- **Situation – UNCH Programs and Strategy**
- **Situation – UNCH Programs and Strategy: Margin per Case**
- **Situation – UNCH Revenue Cycle**
- **Situation – UNCH Managed Care**

Situation – UNCH Financial

Financial Baseline Revenue Assumptions

- Admissions grow slightly, at 1.5% in FY05 and thereafter at 1% per year.
- Case mix remains constant at 1.53.
- Length of stay remains constant at 6.57 days.
- Net Patient Revenues rise at nearly 8.5% in FY05, and then at 4.8% per year in future years, contemplating faster growth in O/P revenues.
- No changes in payer mix.
- Charity increases from 4.0% to 4.1%.
- No change in contractual adjustment rates.
- Other Operating Revenues consistent with FY05 budget – anticipated no events that would increase or decrease investment returns.
- No additional cost settlements from prior years' unsettled cost reports are anticipated.
- Days in receivables remain constant at 70 days.

[Portions of the Assumptions are confidential and have been redacted.]

Situation – UNCH Financial

Financial Baseline Expense Assumptions

- Interest Expense is moved “above the line” to be included as an Operating Expense.
- Management assumed salary increases would average 4.5% per year.
- Benefits costs increase each year due to anticipated changes in state pension funding and health insurance premium costs. Benefits rates are 18% in FY05, 20.54% in FY06 and 21.75% in FY07. However, overall benefit rates are not this high because there are salaries for which the benefit rate is lower (i.e., housestaff) or there are no benefits (i.e., contracted personnel).
- One measure of calculating the gap was to hold Paid Hours/CMI Adjusted Discharge at 151.7 – a result of using the actual end-of-year FY04 FTE count (excluding housestaff).
- Bad debt expense grows slightly from 4.1% in FY05 to 4.4% thereafter.
- No additional debt is anticipated.
- Staffing growth is projected at 3.1% for 2005 and 1.7% each year thereafter.
- Medical malpractice cost growth is 38% in FY05 and projected to grow 15% per year thereafter.
- Supply spending growth is 6.2% per year, except in FY05, for which 2.6% growth is used, reflecting a potential MedAsset savings impact. These projections include supplies and pharmacy products combined.

UNCH Financial – Operating Margin
Baseline Gap Analysis

This page is confidential and has been redacted.

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Summary of Important Recommendations – UNCH

- **Organization and Management** *[Confidential]*
- **Operations and Productivity**
- **Patient Care Services**
- **Supply Chain**
- **Pharmacy**
- **Operating Room**
- **Anesthesia Services**
- **Information Services**
- **Clinical Resource Management**
- **Capacity Management/Throughput**
- **Programs and Strategy** *[Confidential]*
- **Revenue Cycle – Hospital**
- **Managed Care** *[Confidential]*

NAVIGANT CONSULTING

Summary of Important Recommendations – UNCH

Organization

- Adopt the proposed organizational chart.
- Create a position of Inpatient Medical Officer.
- Have VP Surgical Services report to CNO with nursing directors reporting to the CNO for W&C, Med/Surg, Psych and Rehab, Oncology, Cardiovascular and ED.
- Eliminate matrix management.
- Have hospital-based clinics become the responsibility of UNC P&A.

Management

- Review management titles and develop a plan for consistent and reasonable management titling throughout the organization.

Summary of Important Recommendations – UNCH

Operations and Productivity

- Develop a plan and a schedule to reduce FTEs as required to achieve labor expense reductions, utilizing departmental productivity analysis.
  - Utilize attrition and reductions in overtime, agency and per diem employees to minimize the impact on full-time employees.
  - Flex staffing (upward and downward) to align with variances in workload.
- Develop or acquire a bi-weekly productivity monitoring system.
- Coordinate staffing for clinical departments so that staffing is appropriate for the number of patients scheduled for each hour the department is operational.

[Portions of the Recommendation are confidential and have been redacted.]

Summary of Important Recommendations – UNCH

Patient Care

- Continue programs to recruit and retain adequate staff, with the focus upon retention efforts.
- Continue the efforts to reduce traveler usage.
- Establish consistent monitoring of OT usage as a % of total worked hours with a target of < 3%.
- Reduce overall sitter usage.
- Revise staffing plans to meet recommended HPPD targets.
- Develop long-range capital plan to replace current central monitor model with improved technology.
- Reduce the Peripherally Inserted Central Catheter (PICC) team staffing.
- Develop an education plan that reduces overall resources over the next two to three years to meet established targets.
- Require education to demonstrate the ROI in clinical practice as part of performance expectations.
- Eliminate all “premium” plans that pay for “non-worked” time in addition to “worked” time.
  - Replace these plans with regular pay plans that compensate for “actual worked hours” and incorporate the current differential plans as they currently exist (i.e., shift or weekend).

Summary of Important Recommendations – UNCH

Supply Chain

- **Clinical Opportunities: Cardiology / Radiology Cath Lab Pacemakers, ICDs and Leads**
  - Drive consolidation of the number of vendors to achieve optimal level of savings.
  - Pursue a capitated pricing structure for achievement of some of the potential savings as an alternative strategy.
  - Enlist physician support to negotiate contracts with vendors to improve pricing.

  [Portions of the Recommendations are confidential and have been redacted.]
- **Surgery Orthopedic Implants – Total Joints**
  - Enlist physician support to renegotiate contract with Zimmer and to contract with other vendors to include new technologies and improved pricing.
  - Continue to work aggressively with the vendors to move remaining inventory to consignment.
- **Purchased Services Energy**
  - Evaluate options for procurement of electricity and steam from outside of University. Renegotiate pricing from University.
  - Continue aggressive in-house energy efficiency program.
- **Clinical Laboratories**
  - Standardize 90% of tests to two to three primary reference testing vendors.
- **Linen**
  - Develop and implement a total linen control program to reduce current pounds processed per adjusted patient day to the benchmark 12 to 13 pounds per adjusted patient day.
  - Renegotiate Linen Processing rate with Co-op. Evaluate alternative laundry processing companies.

Summary of Important Recommendations – UNCH

Supply Chain

- **Telecommunications**
  - Evaluate opportunity to transition long distance service to more competitive per minute rates. Determine patient care areas with most loss of patient phones. Institute process to charge patient for disappearing phones.
- **Lab Courier Service**
  - Analyze all current courier and delivery services within UNCH. Look for areas of improved efficiency and consolidation of services. Install a routine audit process to ensure accurate billing and optimized utilization.
- **Food & Nutrition**
  - Monitor food cost utilization within patient food preparation and cafeteria operations. Set targets for food utilization and track achievement toward that goal.
- **Environmental Services**
  - Identify 10 to 15 items purchased through Sodexho; review pricing on semi-annual basis.
  - Develop formulary of available environmental services items; communicate to organization.

Summary of Important Recommendations – UNCH

Supply Chain

- **Medical Records / Transcription**
  - Evaluate "Edix" Transcription work – obtain lower per line pricing for edits.
  - Amend Medical Records Destruction policy, and evaluate potential for reducing space requirements for in-hospital records storage.
- **Inventory Management**
  - Evaluate Par and Stock Levels in both Central Distribution and Surgery to identify slow-moving items. Determine appropriate min-max levels and develop strategy to reduce inventory on these items.
  - **Durable Medical Equipment:** Work with Physical & Occupational Therapy to develop standard formulary of items that can be communicated to departments for order. Evaluate pricing available through Sodexho (they purchase wheelchairs and stretchers for Patient Transportation department at discount).
  - **Temporary Agency Fees:** Standardize – push more spend to one to two key vendors. Renegotiate pricing based on additional volumes.
- **Supply Management Processes and Technology**
  - Establish a Supply Chain committee of senior executives to sponsor and promote a system-wide supply chain agenda of coordination, cost reduction, standardization and technology enablement.
  - Certain functionality (Product Management, Contracting, Data Management and Analytics) should be established at the System level to support this "system supply chain agenda."

Summary of Important Recommendations – UNCH

Supply Chain

- **Product Management**
  - **Purpose** - Implement a consolidated value analysis process to drive common product choices across System with the facilities providing demand and input.
  - **Roles** - Establish an Executive Supply Chain Product Management committee led by senior executives of System facilities (both UNC Hospitals and Rex Healthcare) to provide oversight, monitor and promote product system-wide standardization and utilization initiatives.
  - **Activity** - Develop rolling three-month agendas and recruit physician support from both facilities on interim basis to support that rolling agenda. Develop process to ensure that System decisions and directives are carried out at the facility level.
- **System Contract Management**
  - **Purpose** - Development of System contracting organization responsible for interaction with Resource Management and both UNC Hospitals and Rex Healthcare for sourcing and contracting. Utilization of GPO for select commodity items to allow corporate contracting to focus on high-dollar supplies.
  - **Pricing Verification** – UNC HCS should implement appropriate contracting technology, which allows for contract information, including pricing, to be input into respective MMIS; this would allow Purchasing personnel to verify pricing at the time of order placement.
  - **Usage Information** - System should implement appropriate requisitioning technology to encourage use by end users and gather pricing/usage/volume information to enhance its negotiating position. UNC HCS should develop a corporate strategy for the optimal use of their GPO.

Summary of Important Recommendations – UNCH

O/P Pharmacy

Evaluate the following options:

- Option 1: Improve Formulary control and automatic therapeutic interchange.
- Option 2: Obtain better 340B Pricing.
- Option 3: Increase Patient Assistance Program (PAP) Medications.
- Option 4: Change financial requirement for Pharmacy Assistance Program.
- Option 5 Obtain contribution from counties that utilize UNC Retail Pharmacy services.
- Option 6: *[This option is confidential and has been redacted.]*

- Pursue Options 1-3 to reduce costs.

Summary of Important Recommendations – UNCH

- **O/P Pharmacy**
- Reduce the financial loss associated with O/P Pharmacy as shown in the tables below.

	Net Drug Expense	Net Revenue	Compensation	Other Expense	FTEs	Overall Cost
Baseline (FY2004)	**$9,846,927**	**$4,873,663**	**$2,637,025**	**$338,100**	**39.5**	**($7,948,389)**

	Option	Drug Expense	Change in Revenue	Staff Expense	Other	FTEs	Total Opportunity	Future Overall Cost
1	Improved Formulary Control and Automatic Therapeutic Interchange	$1,170,170					$1,170,170	($6,778,219)
2	Improved 340B Pricing	$786,011					$786,011	($7,162,378)
3	Increase PAP Drug Off-set	$1,075,994					$1,075,994	($6,872,395)
4	Change Financial Requirement for Pharmacy Assistance Program	$51,598	($6,336)	$17,398		0.26	$62,660	($7,885,729)
5	Obtain Contribution from Counties that use UNC Retail Pharmacy Services				$221,944		$221,944	($7,726,445)
6	*[This option has been redacted.]*							

* other includes obtaining additional contribution from counties
(5% contribution included here)

Option	Drug Expense	Change in Revenue	Staff Expense	Other	FTEs	Total Opportunity	Future Overall Cost
Combined opportunity (options 1 - 3)	$3,032,176	$0	$0	$0	0.00	$3,032,176	($4,916,213)
Combined opportunity (options 1 - 4)	$3,083,774	($6,336)	$17,398	$0	0.26	$3,094,836	($4,853,553)
Combined opportunity (options 1 - 5)	$3,083,774	($6,336)	$17,398	$221,944	0.26	$3,316,780	($4,631,609)
Combined opportunity (options 2 - 3)	$1,862,005	$0	$0	$0	0.00	$1,862,005	($6,086,384)

Summary of Important Recommendations – UNCH

Pharmacy

I/P Spend

- Summary of I/P Pharmacy Opportunity Areas
  - Continue with Pharmaceutical Care Outcomes Initiatives (PCOI).
  - Enhance current medication use initiatives via implementing automatic, criteria-based, pharmacist-directed programs.
- Inventory
  - Increase overall turns to 13.7.
- Purchasing
  - Combine Rex Healthcare pharmaceutical spend with UNCH.
  - Maximize economies of scale via greater purchasing power combined.
    - System-wide Formulary will result in additional opportunity due to improved market share.

[Portions of the Recommendation are confidential and have been redacted.]

Summary of Important Recommendations – UNCH

Operating Room

- Improve suite utilization in both ORs and procedural suites.
- Design staffing plans to support revised available hours of operation and achieve targets.
- **Perioperative Services:**
  - **Governance:** Evaluate effectiveness and desired outcomes of AIDE teams and charter a strong OR Governance Committee.
  - **Surgical Leadership:** Articulate strategic plan, recruitment plan and program development for surgery to all surgeons.
  - **Nursing Leadership:** Consolidate number of educators. Reassign responsibility according to proposed organization chart.
  - **Anesthesia:** Optimize anesthesia technician and CRNA staff dependent of overall efficiency of ORs and coordination of other anesthetizing locations. Develop comprehensive cost containment/education program for residents and physicians.
  - **Information Services:** Identify purpose for data collection/analyses and construct a "Perioperative Dashboard."
  - **Case Scheduling:** Charge OR Governance Committee with the complete revision and simplification of the scheduling policy.
  - **Modified Block Scheduling:** Define/publish guidelines for a modified block schedule in P&P format and apply consistently to all participants.
  - **PreCare:** Create a forum to consolidate, update and standardize all preadmission forms. Define value of PreCare to physicians, and elicit their input to improve service.

Summary of Important Recommendations – UNCH

Operating Room

- **Main OR and Women's and Children's OR**
  - **First Case On Time Start & Delays:** Define Start Time performance expectations of anesthesia, nursing, surgeons and patients and achieve 95% of First Case On Time Starts consistently.
  - **Turn Around Time:** Adopt TAT targets, established by specialty or type of case, and monitor consistently to ensure accomplishment and maintenance of targets.
  - **Staffing and Productivity:** Consolidate cases in OR Clusters to optimize nursing and anesthesia resources and reduce available hours to achieve target utilization support.
- **Main PCS/PACU and Women's and Children's PACU**
  - **Patient Flow:** Capture essential patient information electronically to analyze problem areas.
  - Collaborate with bed capacity management that directly impacts on PACU LOS.
- **Ambulatory Care Center (ACC)**
  - **Utilization:** Staff OR available hours/rooms to achieve OR suite utilization, w/o TAT of 75%.
  - **Turn Around Time:** Adopt TAT targets, established by specialty or type of case and monitor consistently to ensure accomplishment and maintenance of targets.
  - **Staffing and Productivity:** Evaluate current productivity against target, and adjust staffing patterns to achieve target of 9.00 worked hours per case.

Summary of Important Recommendations – UNCH

Anesthesia Services

Short -Term Stabilization of the Anesthesia Department:

- Bridge the immediate Anesthesia budget shortfall in UNC P&A's FY04-FY05 budget.
  - Advance the department a line of credit of $500,000.
    - This line of credit will be drawn down over the next six months by the following credits to the department to a total of no greater than $500,000 during FY05:
      - Reimbursement for "mission-based" services, i.e., Labor and Delivery epidurals for OB at $XYZ per case.
      - Additional payment for supervision of CRNAs of $XYZ per Anesthesia unit.
      - Strategic payments for coverage of new sites to be shared between UNC P&A and the hospital.
        - » E.g., New plastic surgery ORs

Immediate Recommendation (0-3 months):

[This recommendation is confidential and has been redacted.]

Summary of Important Recommendations – UNCH

Anesthesia Services

Intermediate Recommendation (3–6 months):

- Implement OR efficiency plans.
  - Adjust hours of OR operation to yield utilization of 70%+.
  - Adjust CRNA FTEs in parallel with reduced hours of OR operation.
- Incentivize clinical production in Anesthesia (“CARTS” system).

Longer-Term Recommendation (12+ months):

- Transfer CRNAs into Anesthesia Department to align goals, improve management.
  - Department assumes full financial and managerial responsibility.
  - Hospital and department annually negotiate supplemental support.
  - Mission-based support (e.g., strategic site expansion may be required).
- Implement additional incentives to minimize CRNA labor costs (i.e., gain-sharing).

Summary of Important Recommendations – UNCH

Anesthesia Services

- **Provision of Services**
  - Renegotiate Labor and Delivery epidural reimbursal with payers, OB ('transfer pricing').
  - Restructure Acute Pain Service, reducing FTE allocation.
  - Merge Chronic Pain with psychiatry/neurology services, ensuring "self-support."
- **Governance**
  - Create single OR Governance Committee by merging existing entities. Develop charter duties for committee members, including Chair and Vice Chair and hold Governance leadership accountable for leading practice targets.
  - Support strong physician leadership of OR Governance Committee and mandate committee participation.
  - Trend analysis of operations data in monthly performance "Dashboard".
  - Develop OR Scheduling Policy with embedded leading practices; distribute to OR community.
  - UNC leadership must strongly support ruling "triumvirate" of surgery-anesthesia-nursing.
- **Staffing**
  - Implement 1:3 staffing ratios in non-teaching, high-volume ORs; cluster individual on-call obligations and review vacation allocation.

[Portions of the Recommendations are confidential and have been redacted.]

Summary of Important Recommendations – UNCH

Information Technology

- Address consolidating UNC P&A IT support under UNC Hospitals ISD when UNC Hospital "shadow" IT organization consolidation is complete.
- Continue with detailed planning to support the direction expressed at the annual IT planning retreat. Ensure that replacement estimates for Siemens Invision, GEAC (HR/Payroll) and UNC P&A Billing are included.
- Create a decision-making framework for determining if the organization should evolve from Siemens Invision to Siemens Sorian or if the organization should go out to the market for an alternative. Considerations include cost and functionality relationship over time.
- Augment the IT guiding principles to also cover standardization of medical technology and departments implementing technology without prior coordination and sign-off by ISD.
- Leadership on both the revenue cycle and IT Team need to implement protocols for capturing and addressing revenue cycle issues.
- Evaluate and implement medical necessity software in conjunction with UNC P&A.
- Optimize use of resource scheduling tool. Evaluate enterprise-wide scheduling to be used for both UNC P&A and UNC Hospitals for potential purchase ASAP (2005-2006).
- Evaluate the use of CT Vision as the denial management tracking and workflow system.
- Expand the use of CT Vision and Sovera wherever possible to promote paperless revenue cycle operations.

Summary of Important Recommendations – UNCH

Clinical Resource Management

- Use internal and external variation to monitor LOS reduction for case rate patients.
- Establish a position of Inpatient Medical Officer responsible for the cost and quality of care.
- Reorganize the Care Management Department so that it reports to the Inpatient Medical Officer.
- Care Management and Social Services report to a single manager, who then reports to the Inpatient Medical Officer.
- Develop the Care Management/Capacity Management infrastructure, including a Case Management software system.
- Institute a Hospitalist program.
- Establish a cost and quality gain-sharing program.
- Improve the transfer process.
- Decrease Transfer DRGs.
- Improve level of care placement.
- Scrutinize observation cases with the goal of appropriately converting them to I/P when and if appropriate.

Summary of Important Recommendations – UNCH

Capacity Management/Throughput

- Reorganize Case Management/Utilization Review/Social Work/Pre-Auth to report to one Director.
- Shift current case management model from a UR focus to a Care Coordination focus.
- Determine service-specific needs for rounding practices that support discharge planning needs for patient population.
- Develop communication systems involving all care givers and family in coordination of patient discharge.
- Evaluate post-acute placement needs quickly during patient stay and communicate to the patient and family the importance of planning for the post-acute care.
- Implement processes during evening resident rounds to capture patients for anticipated discharge the next morning.
- Collaborate with physician leadership to improve outlying LOS with physician report cards.
- Establish Patient Throughput Steering Committee to meet on a bi-weekly basis to hear reports from front-line management involved in the patient throughput initiative and to discuss roadblocks and action plans.
- Determine official “Discharge Time” – most effective time should be before noon – and communicate expectations to all caregivers, patients and families.
- Reorganize daily “Bed Meeting” to plan for all admissions including surgical volume, cath lab procedures that convert to inpatients, clinic patients, ED admissions, etc.
- Implement accountability systems to include bed management metrics on each nursing unit and with all services that support patient movement.
- Implement “day before discharge” notice program on all nursing units and develop accountability systems to measure use of program.

Summary of Important Recommendations – UNCH

Capacity Management/Throughput

Ancillary

- **Laboratory**
  - Project capacity of phlebotomist draws based on current staffing and collection times.
  - Document and trial a “best practice” phlebotomy collection run.
- **Radiology**
  - Project capacity for each section based on current staffing and equipment.
  - It is necessary for IT to support a special flagging of diagnostic procedures in Lab and Radiology for pre-discharged patients to improve response time for pending discharges.
  - Analyze no-show, add-ons, cancellations, I/P, OP, ED, walk-ins and scheduled patients by day for trending.
- **Environmental Services**
  - Implement discharge notification system in all areas to allow prioritization of patients.
  - Assess staff understanding and compliance of the bed notification and cleaning process.
  - Implement quality, service, and cost measurement and reporting system.
- **Transport**
  - Negotiate with external customers on expectations of service; measure and report frequently.
  - Develop and assign specific downtime duties.

Summary of Important Recommendations – UNCH

Capacity Management/Throughput

Bed Assignment

- Define specific role for “Patient Flow Coordinator” to oversee all bed requests.
- Redefine roles and responsibilities of bed assignment team.
- Implement one large “Bed Board” to visualize all beds in the hospital simultaneously – begin with a manual magnetic bed board before progressing to a more sophisticated electronic system.
- Implement “one call” system for physicians to call for direct admission of patients into hospital.
- Develop process to plan for bed assignment needs using “Future Scheduled Admissions” information in SMS.
- Define and implement incentive program to identify beds quickly at the front-line staff level.
- Pursue opportunities to align supply and demand of beds by service.

Emergency Department

- Engage key physician leaders in addressing the physician practice delays in the ED.
- Develop a strong senior management message around the sense of urgency in improving patient throughput and the role it will play in solidifying the future of UNC Hospital.
- Develop and implement a core set of performance metrics and targets to increase awareness and accountability around the patient throughput process.
- Implement an organization-wide “trigger system” with clear action expectations for each patient throughput process stakeholder during high census days and periods of ED overflow.
- Conduct a detailed analysis of ED volume trends and the feasibility of utilizing the Peds ED area as an alternate care setting to enhance patient flow.

Summary of Important Recommendations – UNCH

Capacity Management/Throughput – Financial Impact

Opportunity	Description	Operational Impact	Financial Impact	Comments
Direct Financial Benefit and Impact on ROI				
Length of Stay Reduction	Decrease excessive days	Decrease excessive days by 12,000 to 14,500	**$4.2 M to $5.1M**	Projected opportunity represents impacting total excessive days by 50% to 60% at a savings of $350 per day.
	Back-fill opportunity	Additional capacity for 1,300 to 1,600 potential additional discharges	**$5.5M to $6.6M**	Opportunity calculation based on an estimated contribution margin/case of $4,123 per an analysis completed by Decision Support. Feasibility of back-fill opportunity will be analyzed during the implementation phase.
ED Length of Stay Reduction	Decrease in elopement rate	1 to 2 additional treat and release patients per day	**$550,000**	Projected opportunity represents decreasing the elopement rate from 3.8% to 2.0%, which equates to an increase in ED charges based on the average charge per visit of $914.
Indirect Financial Benefit				
Improve Observation I/P Conversion Process	Converting patients from Observation status to I/P when appropriate will improve revenue opportunity.		***TBD DURING IMPLEMENTATION PHASE***	These financial benefits will be realized as a result of the Care Management initiatives of the Patient Throughput and Capacity Optimization Implementation Plan.
Decreased Variable Costs – Improved Productivity	Increased throughput without a change in staffing levels will decrease valuable costs per unit of service and increase productivity.			Accountability systems and performance metrics implemented during the engagement teach the front-line managers how to proactively manage volume and plan for daily workload.

Summary of Important Recommendations – UNCH

Programs/Strategy

[Recommendations are confidential and have been redacted.]

Revenue cycle

Organization Structure

- Reorganize revenue cycle organizational structure.
- Implement a comprehensive centralized Patient Access model.
- Establish system-wide Patient Access Council (PAC) with representation from UNC Hospitals and UNC P&A.

Pre-Arrival Services

- Standardize demographic, insurance, clinical data elements collected during scheduling process.
- Develop a centralized Pre-Arrival Unit.
- Create a “no authorization, no service” policy for elective patients.

Registration and Patient Access

- Refine the current proposal to create registration hubs.
- Begin immediate efforts to collect time of service payments for UNC Hospitals.
- Evaluate implementing a formal process in the ED for evaluating non-emergent patient liability prior to treatment/service.

Inpatient Coding and Documentation

- Continue implementing concurrent review and query process and provide education and feedback on clinical documentation issues to physicians and coding staff in real-time.
- Define protocols and policies for when case managers and coders will query for additional documentation for diagnoses and procedures. Develop policies collaboratively with physician liaison(s) from service areas, and determine roles and responsibilities.

Summary of Important Recommendations – UNCH

Revenue Cycle

Outpatient Coding APC Analysis

- Consider focused rebilling initiative for observation patients.
- Review process to bill for infusions and injections in the ED and observation setting.
- Consider re-billing claims with missed charges.
- Provide education to staff regarding charges for infusions/injections in ED and observation setting.
- Provide education to ED nurses regarding the correct use of the ED facility level tool.

Charge Master Review

- Conduct a comprehensive CDM audit to identify CDM inaccuracies and revenue opportunities.
- Address all issues identified by updating the codes, charges in CDM at levels below allowable fee schedules and market rates, revenue code mismatches, and potential items missing from the CDM.

Charge Capture Assessment

- Initiate a focused retrospective audit on O/P services and Labor and Delivery accounts to capture revenue losses on claims with percent of charge base reimbursement.
- Initiate a similar audit focused on concurrent accounts for optimization of revenue early in the processing cycle and maximization of payer reimbursement with timely filing restrictions.
- Expand the current Denial Management program to include all components of a robust Denial Management program.
- Implement improved Patient Access processes that focus on proactively preventing “front-end” denials related to financial clearance, medical necessity or authorization for service.

Total Uncollectibles

- Enhance up-front collections process. Establish goals for pre-service collections and design field to capture co-pay/deductible amounts for improved collections reporting.
- Require prepayment for non-emergent, elective services.

Summary of Important Recommendations – UNCH

Revenue Cycle

Payment Variance

- Evaluate and enhance Siemens Contract Manager.
- Increase coordination among Finance, Managed Care and Patient Financial Services.
- Renegotiate to improve contracting terms and conditions around high-risk cases.

Cost to Collect

- Evaluate current vendor contracts, performance, cost and return. Determine if RFPs should be submitted for competitive pricing and contract renegotiations.

Unbilled and DNFB

- Manage unbilled accounts to minimize the billing cycle from the date-of-service (DOS) to the final bill.

Cycle Time

- Reduce average cycle time from DOS to bill date.
  - When reducing cycle time from DOS, need to consider add-on lab tests ordered by physicians that require time lags, reference lab testing and reporting.
- Perform detailed analysis on late charges, unmatched charges and claim scrubber edits, without sacrificing clean submission rate.

Aged AR

- Focus on cash acceleration to reduce aged invoices receivable greater than 90 days old from DOS.
- Evaluate necessity of credit balance clean-up project.

Managed Care

[Recommendations are confidential and have been redacted.]

Financial Model

The following pages are confidential and have been redacted.

- **Financial Model – Intervention Summary – UNCH**
- **Financial Model – Before and After Interventions UNCH Comparative Gap Analysis**

NAVIGANT CONSULTING

Implementing the Performance Improvement Plan

Keys to successful implementation of the performance improvement plan are:

- **Adopting the plan and communicating with stakeholders.**
  - Officially adopting the plan by Board and Leadership.
    - As well as UNCH and UNC P&A.
  - Communicating its importance to management, staff and physicians.

- **Focus on implementation by the leadership group.**
  - Make PIP implementation tracking part of your regular agenda.
  - Regular reports to the Board on implementation.

- **Focus on implementation by other important bodies.**
  - Make PIP implementation tracking part of your regular agenda.
    - P&A
    - IOC

- **Use tools to help track progress.**
  - List of recommendations, responsible person and timeframe.
  - Utilize productivity monitoring tool for managers to track achievement of WLU standards.
  - Utilize Flash or Dashboard reports to track progress.

Implementing the Performance Improvement Plan

- **Make sure managers know their responsibilities for achieving recommendations.**
  - Providing progress reports.
  - If a manager disagrees with a recommendation toward achieving financial goals, must be responsible for identifying an alternative of equal values.

- **Identify one person to help track achievement of interventions.**
  - Assign one manager the task of tracking results of financial interventions.

- **Seek implementation assistance in key areas which are complex, involve multiple departments and have proved difficult to achieve:**
  - Capacity management/throughput,
  - Front-end processes, and
  - CARTS mission-based management and compensation.

- **Have one member of Navigant team assist in implementing the plan.**
  - Most successful clients have had a member of the team continue to work with the client on an initial and then periodic basis.