

UW Medicine

University of Washington Medical Center Proposed Expansion

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What is the UW Medicine Board recommending regarding facility expansion?

University of Washington Medical Center's Executive Management has recommended, and the UW Medicine Board has concurred with, pursuing construction of a new inpatient tower at an estimated cost of \$159 million with a completion date of 2011. This project provides for two inpatient units, one for adult beds and one for Neonatal Intensive Care Unit (NICU) bassinets. The project also provides for additional diagnostic imaging capacity, as well as future operating room (OR) capacity contiguous with the existing main operating room.

What planning processes have led to this conclusion?

In FY05 UWMC undertook a comprehensive facility master plan assessment to identify current and projected space needs of the Medical Center. As part of this planning process, UWMC working with NBBJ consultants, department chairs, faculty and staff assessed projected volumes for programs at UWMC. This assessment included a demand forecast that was based on both internal and external factors. Key factors considered included:

- Projected population growth and its demographics
- Service line strategic plans, market share and competition
- Developments in medical technology

This information culminated in an inpatient volume forecast for each of UWMC's clinical service areas. In total, the volume projections yielded a 2.3%-2.4% annual growth rate in admissions, which is consistent with the average admission growth percentages over the past five years. These inpatient projections, even after including significant operational efficiencies in reduced length of stay, cause UWMC to need approximately 430 beds in 2015, and 490 beds by 2020.

In addition, the process identified current major deficiencies in space available for Diagnostic Imaging, the Neonatal Intensive Care Unit, support space for Nursing, Surgery, and Essential Services, as well as a lack of teaching space needed to support training programs.

What was the recommendation of the Comprehensive Facility Planning Study?

The immediate and future needs of UWMC, based on its current significant space deficiencies and future strategic direction, cannot be accommodated with the configuration of the existing facility.

What is UWMC's currently available inpatient capacity?

UWMC currently has 394 inpatient beds in operation to serve patients. The composition of these beds is as follows:

- Medical/Surgical and Intensive Care Beds (Non-Specialty) – 280
- Neonatal Intensive Care (Specialty) – 32
- Obstetrics (Specialty) – 41
- Psychiatric (Specialty) – 16
- Rehabilitation (Specialty) – 22
- Clinical Research Center (Specialty) – 3

The chart below reflects the capacity analysis based on the volume projections for Medical/Surgical and ICU beds (non-specialty beds). A targeted occupancy of 85% specific to non-specialty beds is an industry standard, and is well above the occupancy level of other local hospitals, with the exception of Harborview.

This capacity analysis indicates that by 2010, UWMC would reach 90% occupancy, a level above the desired target occupancy level. Patients, and especially elective commercial pay patients, will be denied access to UWMC services at occupancy levels beyond 90%. A further 0.25 day reduction in average length of stay improves capacity somewhat, but 90% occupancy is still reached by 2011. Adding one 32-bed inpatient unit, combined with reducing length of stay, improves capacity and 90% occupancy is not reached until 2015.

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What options were initially considered by UWMC?

As part of the FY05 Comprehensive Facility Planning Study, multiple alternatives were evaluated including:

- Limited off campus relocation of services
- Renovating the existing facility
- Building a new hospital at another site

- Building a new inpatient tower on UWMC's site

At that time, UWMC evaluated its options and determined that the most economic and strategic approach was two-pronged:

- First, reduce average patient length of stay to address immediate and short-term capacity issues. UWMC has reduced length of stay from 6.5 days in FY05 to the current YTD FY07 value of 6.1 days.
- Second, build a new inpatient tower to address longer-term capacity issues.

The new tower was planned to be built in two phases. The first phase would include the base structure with space for additional Diagnostic Imaging and shell space for future OR's plus one built out and one shelled inpatient unit. The second phase would include three additional inpatient units built on top of the Phase I structure.

The original cost estimate for building Phase I of the new inpatient tower on the UWMC site was done about two years ago and totaled \$85 million. During the recent pre-design planning phase of the building, it was determined that there were significant cost escalations in the project due to:

- New configuration for the new inpatient tower – a larger foot print is needed to span the road and a larger nursing unit floor plate is needed to accommodate teaching functions. A second built-out (rather than shelled) inpatient unit is required to accommodate the need for new NICU space.
- New requirements for UWMC to provide its own emergency power for the expanded facility, leading to a previously unplanned basement.
- Construction inflation – particularly high in the post hurricane Katrina environment when combined with international/local construction demand and new code requirements for essential public facilities.

Based on the above factors, the updated cost estimate provided to UWMC by its architects, Anshen & Allen, in the Fall was over \$180 million.

These significant cost escalations caused UWMC to re-evaluate options.

What additional options has UWMC now considered?

UWMC management evaluated three principal options

- "Do nothing" (no construction) to address the inpatient capacity issue
- "Minimal Renovation, and then Build New Later"
- "Build New Now" – Management Recommendation

"Do Nothing" (no construction) to address the inpatient capacity and other space needs

UWMC management does not recommend the "do nothing" option because of the following factors:

- Population and demographic driven growth alone will exceed existing facility capacity in the future. Also, UW Medicine has invested significantly in the growth of key service lines/areas through recruitment, facility expansion, and joint programs in the past several years.
 - In order to remain competitive in profitable service lines, the facilities need to be updated as healthcare is becoming more of a consumer driven enterprise.
 - UWMC is a high volume, low margin business with high fixed costs. Volume growth is key to achievement of budgetary targets as it both increases net revenue and reduces cost per unit.
- Faculty morale would suffer, as hope for critical program expansion would be dampened.
- Inability to meet needs for teaching space may begin to endanger continued ACGME accreditation of teaching programs
- Code requirements. Older facilities may, at some point, be cost prohibitive to upgrade to new code requirements.
- Project costs for new construction will continue to escalate, raising issues around future affordability.

The potential financial impact of doing nothing was analyzed. It was assumed that the inpatient volume growth stops when occupancy reaches 90%. Payor mix is assumed to degrade even further by a shift from commercial to government payors of 1%

per year. In addition, 50% of the labor cost efficiencies are assumed to be unachievable, due to the limit on volume growth. In general, as inpatient growth is capped, operating margin begins to decline and rapidly becomes negative.

“Renovate and Build New Later”

UWMC also evaluated an option that assumed a minimal renovation beginning in the FY08-FY09 time period, followed by construction of a new inpatient tower beginning in the FY10-FY11 time period.

The cost of the minimal renovation option is \$69 million and includes converting 8SE (currently clinic and infusion space) into a 19 bed inpatient unit. In addition, the current NICU and two additional inpatient units would be remodeled to accommodate 40 bassinets.

The cost of a new inpatient tower, with one built out inpatient unit inflated at 12% for two years is projected to be \$178M.

UWMC management does not recommend this option because of the following factors:

- Because the renovation option adds only 19 adult beds, UWMC would rapidly reach capacity again (FY13), necessitating the construction of the new inpatient tower beginning immediately after the renovation.
- Renovation will be internally disruptive to existing operations, and would need to be managed in the same time frame as design is occurring for the new inpatient tower.
- Renovation will not meet the needs for more teaching or diagnostic imaging space until the new inpatient tower is built. This option will provide for only limited expansion of NICU beds.
- Renovation is less affordable in the mid-term. The analysis of the renovation option showed that it places less financial pressure on UWMC in the very short-term because project costs are initially lower. However, given that additional capacity must be addressed within a few years, the addition of a second major expansion project so closely following the renovation would place significant financial exposure on UWMC in the mid-term, particularly with the added risk of continued escalation of construction costs.

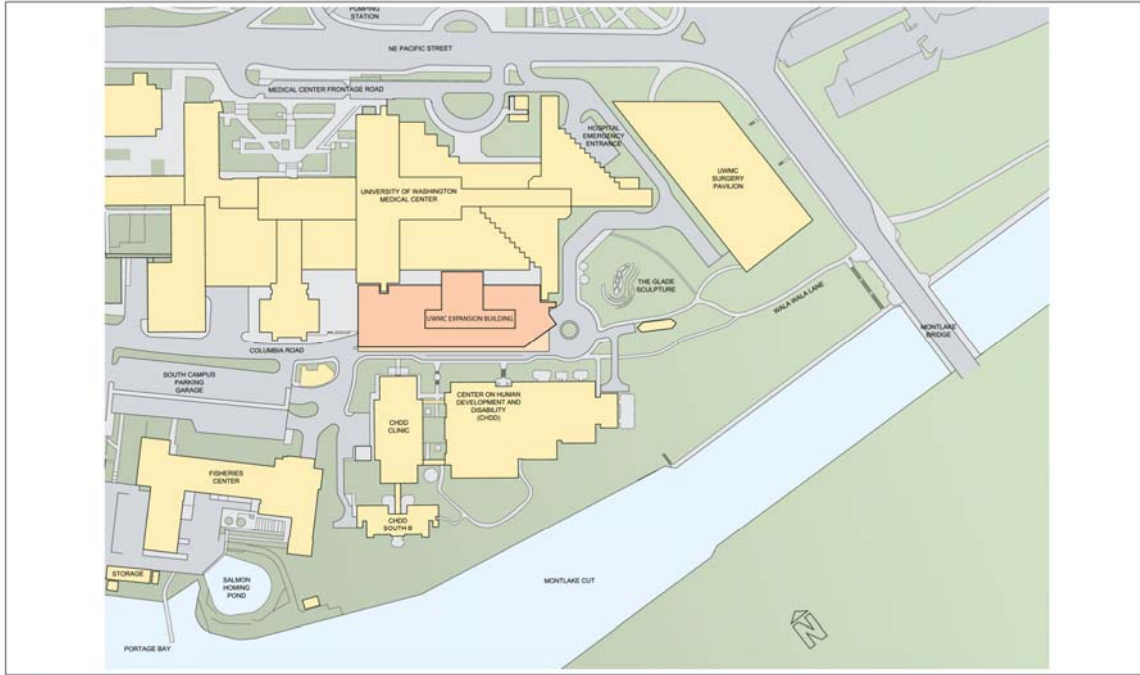
“Build New Now” – Management Recommendation

The significant cost escalations caused UWMC to evaluate numerous options for new construction. The design team generated more than 12 options for the construction of the new inpatient tower. These options ranged from \$142 to \$192 million. All options include a new inpatient tower with a total of four inpatient units to be built in phases. (Project costs listed above only reflect Phase I of construction for one or two inpatient units.) Of the four inpatient units, three would be for adult beds, housing approximately 32 beds each, and one would be for NICU bassinets, housing approximately 50 bassinets. All options include diagnostic imaging and shelled operating room capacity and have a project completion date of 2011.

The UW Medicine Board recommends pursuing construction of a new inpatient tower at an estimated cost of \$159 million with a completion date of 2011. This project provides for two inpatient units, one for adult beds and one for NICU bassinets. The project also provides for additional teaching space, diagnostic imaging capacity, as well as future operating room capacity contiguous with the existing main operating room.

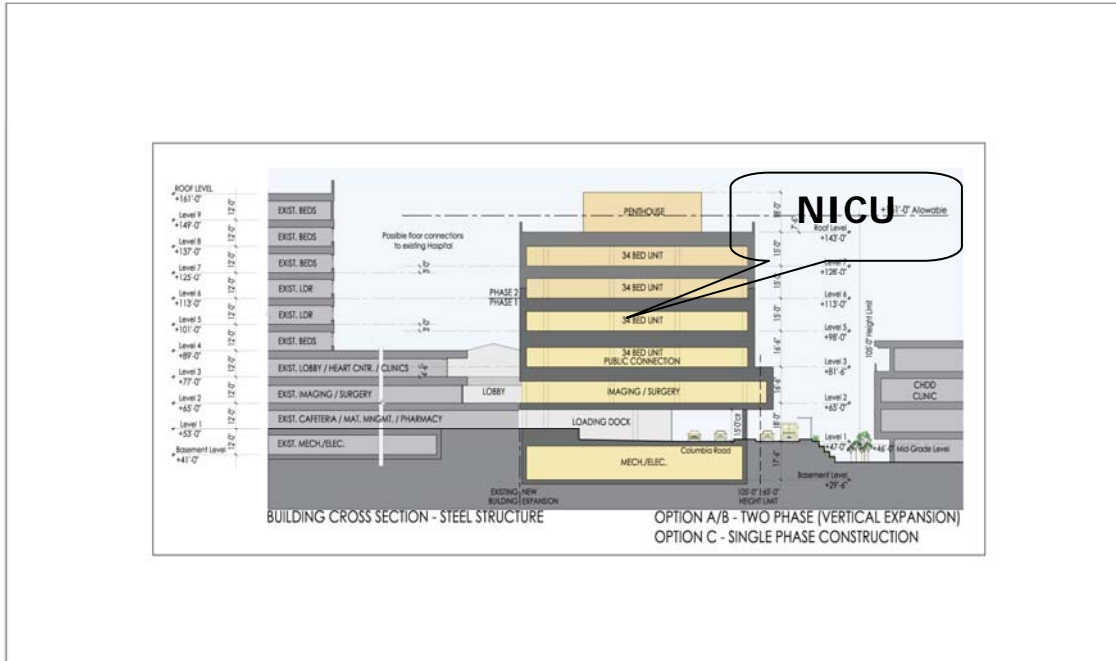
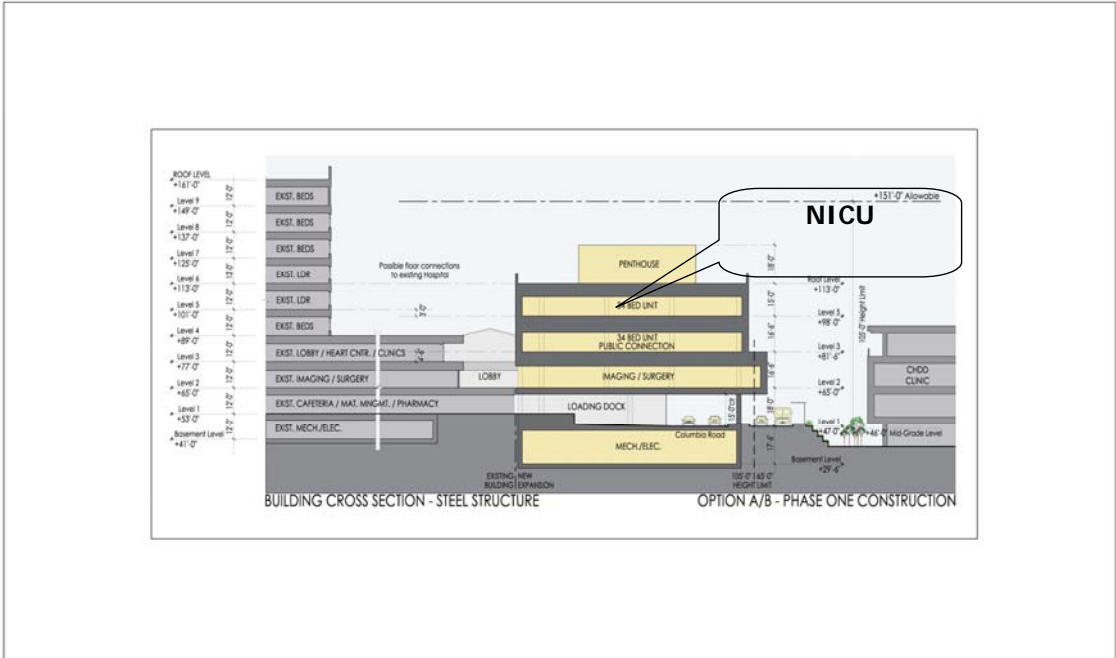
The benefits of the recommended option include:

- Capacity – A new inpatient tower is required to increase key service line bed capacity and meet expected inpatient demand of the future. The building of a new inpatient tower with the opportunity for Phase II construction would provide for growth through the 2020 time period for non-specialty beds, based on current volume projections.
- The project meets the needs for additional teaching space, diagnostic imaging capacity and support space.
- The new building allows for greater expansion of NICU beds, which is critical for preserving the option of a joint perinatal program with Children’s Hospital and Regional Medical Center.



UNIVERSITY OF WASHINGTON MEDICAL CENTER EXPANSION

ANSHEN+ALLEN



Can UWMC afford this expansion?

Although the expansion does put significant financial pressure on UWMC, it is the opinion of the management team that this expansion is critical to the long-term success of UW Medical Center and that the “build new now” option is the best balance of risk, return, and affordability.

UWMC uses a ten-year financial projection to illustrate how it plans to generate sufficient margin to meet its operational needs and to finance capital expansions. The basis of the assumptions driving the financial plan is current strategic directives and operational initiatives, combined with near term market and industry forces. The ten-year plan is the base of the financial projections used for the expansion analysis.

Each of the renovation and new construction options were overlaid on the multi-year financial plan to assess UWMC’s financial position given the project costs and associated debt requirements. Key factors considered included:

- Liquidity – cash position
- Operating margin and operating cash flow margin (EBIDA)
- Debt capacity

In addition, UWMC conducted a full Net Present Value (NPV) and Internal Rate of Return (IRR) analysis on the following options: 1) “Renovate & Build New Later” and 2) “Build New Now”. Option 1, “Renovate and Build New Later”, after full build out, has a slightly negative NPV, and an IRR of 10.6%. Option 2, “Build New Now”, after full build out, has a positive NPV (\$ 48.6 M) and an IRR of 12.4%.

UWMC engaged Kaufman Hall, a national healthcare financial advisory firm, to review the financial projections. The scope of the engagement was to:

- Review UWMC’s long-range financial plan from an industry perspective;
- Assess the overall project financing plan, including input on the cost and amount of debt to be issued;
- Assess the capital marketplace’s view on the credit worthiness of UWMC and the UWMC borrowing group.

Kaufman Hall’s review, in summary stated, “We think that the size and type of this project is within the financial means of UWMC, given the financial projections which we believe were based on reasonable assumptions.” Kaufman Hall recommends the \$159M “build new now” option, and that UWMC debt finance 100% of the project costs.

In addition, UW Treasury is reviewing the financial projections and associated debt capacity in the context of the debt capacity of the UWMC, UW Medicine and the entire University of Washington. Project funding is contingent upon UW debt issuance; UW Treasury is conducting due diligence on this UWMC project as well as the Phase III Lake Union Research Project with an anticipated due date of April 30.

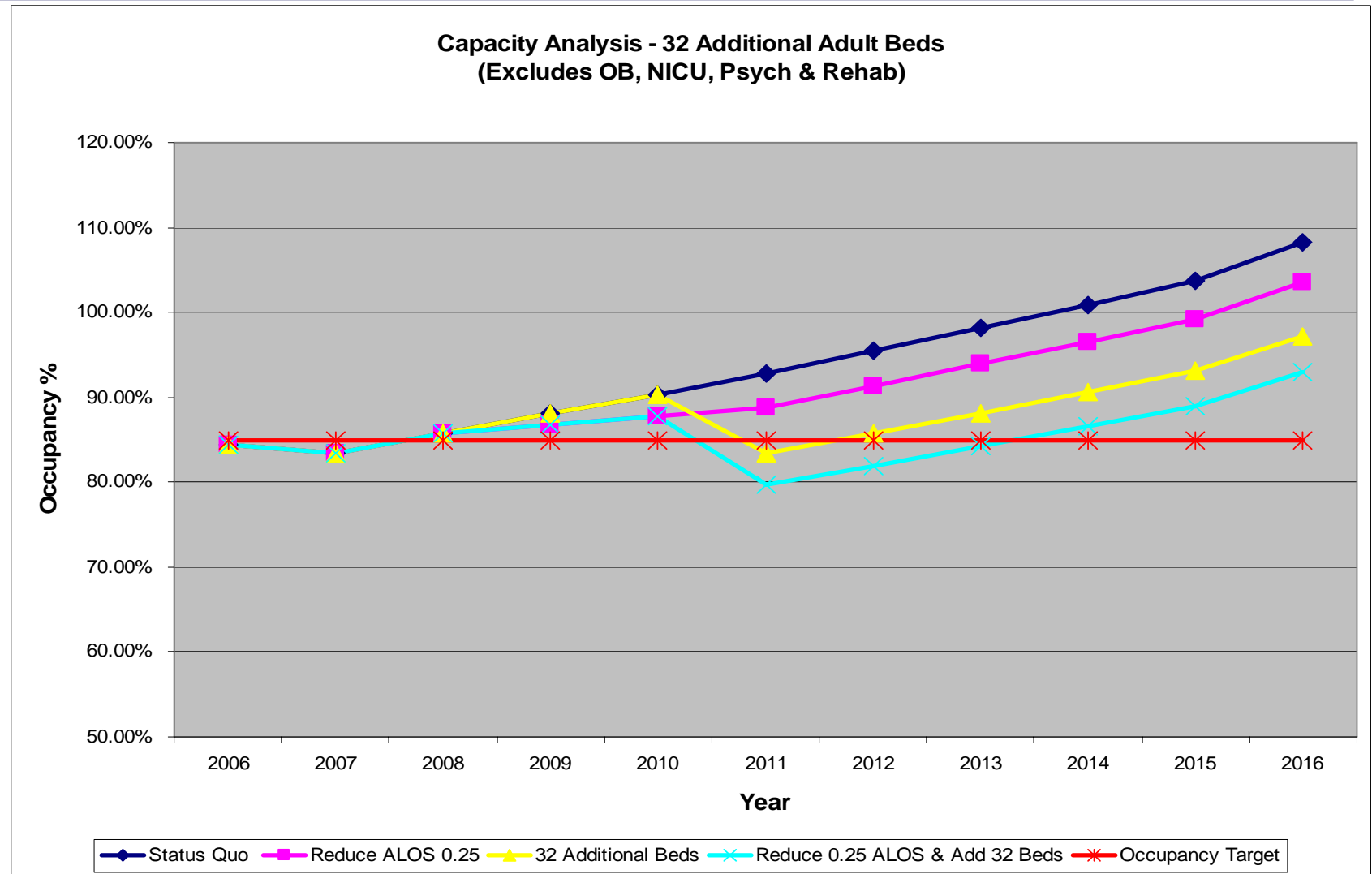
What are the risks of going forward with this project?

Key risks specifically associated with this project include construction inflation (above current projections), executing a billing system conversion during a time of significant capital expansion, Sound Transit/ SR 520 potential limitations to patients’ access to UWMC and failure to achieve revenue and expense targets. Risk mitigation strategies are listed below:

- Construction inflation (above current projections)
 - Risk Mitigation Strategy – The current cost estimates were developed by a team composed of the architects from Anshen + Allen, an independent cost estimator from Davis Langdon, and a project manager from Skanska, U.S.A., a large contractor who does large hospital and university projects. If construction inflation is greater than budgeted by 10%, (approximately \$16 million), management would anticipate reducing annual capital spending to offset this cost increase.
- Implementation of the billing system conversion takes longer to complete and Accounts Receivable are elevated for a longer period of time.
 - Risk Mitigation Strategy – First Consulting Group has been engaged to provide an independent assessment of the organizational readiness of the conversion. In addition, an independent quality assurance consultant will be hired to monitor the ongoing progress of the conversion. In addition, UWMC plans to secure a line of credit to address short-term cash requirements if this should prove necessary.
- Sound Transit/ SR 520 potential limitations to patient access.

- Risk Mitigation Strategy – Many of UWMC's outpatient clinics are already located off campus. In addition, UWMC is continuing to evaluate the relocation of main campus clinics and outpatient services to off campus locations.
- Achievement of revenue and expense initiatives
 - Risk Management Strategy – achievement of targeted initiatives is an annual budgeting issue. Management will make appropriate adjustments, including seeking outside consulting expertise if necessary to achieve the targets.

Adult Bed Capacity Analysis



Cost Differences: Comprehensive Facility Planning Study vs. Proposed Project

