1.5 **Describe the involvement of nurses at all levels in the budget development process.**

Budget development is an ongoing, iterative process that involves nurses at all levels in the organization. Although formal operational budget development occurs at a specific point in the annual fiscal cycle, budget management and analysis continues throughout the year, providing information necessary for budget development for the subsequent year. The basis for the operational budget is the cost center or patient care unit, and it is here that Staff Nurses and unit-based leadership have significant involvement.

For the thirty-seven inpatient units, nursing workload is the driver that determines the personnel resources required. Staff greatly influence this determination by describing and quantifying nursing workload through the QuadraMed® AcuityPlus™ Productivity, Benchmarking and Outcomes System (the AcuityPlus™ System). The Staff Nurses caring for the patients classify each patient every day, based on their assessment of the patients’ needs for the 24-hour time period. Resource Nurses provide a report of actual staffing used to provide care during each 24-hour time period. The classification and staffing data are critical to identifying, justifying and allocating nursing resources and are the basis for projecting the budgeted variable staffing and expense in the formal budget process.

The classification data are also used in projecting variable non-salary expenses for the inpatient care units. The ability to predict and justify resource requirements accurately has become increasingly difficult. Patient census alone is not an accurate predictor of resource needs and cost per patient day does not address the increasing acuity of our patient population. The utilization of unit-based workload data provides an opportunity to determine a cost per unit of work based on actual workload and the expense incurred in each of twelve variable accounts. This actual cost per unit of work (actual dollar expenses/actual workload units) then becomes the basis for determining the non-salary budget for these variable accounts. A spreadsheet model has been developed to calculate the current actual cost per unit of work for each variable general ledger account for each patient care unit (attachment 1.5.a). The projected workload data are downloaded into this model, and the projected variable expense for each unit is determined (projected workload units x cost per unit of work). The model spreadsheet is linked to the master non-salary budget spreadsheet, and the workload-based expense calculation is transferred into the master budget as the annual budget projection for variable expenses.
In the development of all of the types of budget, Nursing Directors are key in identifying resource requirements based on input from their staff and unit leadership as well as on their own evaluation of unit functioning. The Nursing Directors provide insight into a variety of components of the staffing model, identifying for example the RN/non-RN mix or level of support personnel appropriate for their units. The Nursing Directors negotiate for needed resources with their respective Associate Chief Nurses; the Associate Chief Nurses negotiate within the nursing executive team with the Chief Nurse; and the Chief Nurse negotiates on behalf of the staff at the organization’s executive level. Further examples of these efforts are described in Force 1.6 and Force 1.7.

In other clinical areas, Staff Nurses also influence the development of the operational budget. For example, in the Infusion Unit, during the regularly scheduled weekly staff meetings, Staff Nurses and leadership review such budget-related issues as the impact of documentation on revenue and reimbursement, and timely turnover of patients in procedure areas. There are unit-based, interdisciplinary meetings that strategize regarding issues of utilization of care teams, patient wait times and staffing requirements. Staff Nurses sit on a collaborative committee that looks at new treatments and the impact on time and revenue. All of these ongoing discussions and decisions are incorporated into operational budget development (attachment 1.5.b).

Another influencing group is the Patient Care Services (PCS) Collaborative Governance Nursing Practice Committee, which includes both Staff Nurses and Advanced Practice Nurses who play an important role in evaluating and approving new and current clinical products for patient safety as well as the products’ effectiveness, efficiency, and cost-effectiveness. Decisions by the Nursing Practice Committee can have a direct impact on the non-salary budget. For example, the committee approved new safety butterflies for retractable push button technology, water-seal chest drainage and dry suction chest drainage, central line dressing kits and hexachloradine antisepsis, and fecal incontinence catheters. These were implemented as they were approved and incorporated into the new fiscal year non-salary budget.

Capital budget development is based in part on the needs identified by the unit staff. For example, in the Pediatric Intensive Care Unit (PICU), intensive care for the cardiac surgical children was difficult to provide with cribs that did not have 360-degree access. Additionally, the access for weights and chest tube drainage was difficult and not conducive to optimal care for these children. The PICU nurses identified these quality of care issues. With the assistance of their Nursing
Director and Clinical Nurse Specialist, they evaluated alternate cribs. Ultimately, new ICU cribs, providing improved, access were budgeted and purchased.

**Doernbecher Critical Care Crib**

Nurses were also integral to the selection and purchase of new beds for adult patients, as described in Force 1.3. Staff identified features that best supported patient care. Units then piloted different beds to determine which product best met the needs of patients and staff. Based on the staff recommendations, over 800 new beds were purchased at a cost of more than $4,000,000 dollars. Attachment 1.5.c describes the process from identification of need to implementation.

More recently, Staff Nurses from seven inpatient units and three perioperative areas evaluated large volume pumps. This occurred under the direction of a steering committee comprised of Nursing Directors, Clinical Nurse Specialists and Nurse Anesthetists. At the recommendation of the clinicians, a specific large volume pump was selected as the standard for the institution. The results were presented to a Combined Leadership meeting in April, 2007 along with a plan for purchase, training and implementation (attachments 1.5.d and 1.5.e).

Program budgets relating to implementation or expansion of programs also benefit from the contribution of the involved staff. Recently, the organization identified the need to relocate and expand the Neonatal Intensive Care Unit (NICU). The involved nursing staff, physicians, Nursing Director and Project Managers first looked at functional requirements, such as family sleep space and improved communication technology, to influence the design of the space which in turn drove the budget for the construction of the new NICU.
<table>
<thead>
<tr>
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<td>FY 07 Budgeted WL</td>
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<td>FY 07 Budgeted WL</td>
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Total Variable $384,933
Infusion Unit Committee Meeting Minutes  
Tuesday 3/14/06 at 3:00 p.m.

Attendance: Alterman, Elizabeth A; Anderegg, Michael; Attar, Eyal C., M.D.; Bartholomay, Mimi, R.N.; Blaszkowsky, Lawrence S., M.D.; Bonell, Linda B., LICSW; Cashavelly, Barbara J., R.N.; Greer, James F., Griffin, Jeanne Marie, NP; Hochberg, Ephraim Paul, M.D.; Johnson, Elizabeth, R.N.; Lafrancesca, Joanne, R.N.; Lipshires, Karen B., R.N.; Ryan, Laura J., R.N.; Younger, Jerry, M.D.

Topics Discussed:

I. **CADD pump rollout** – Contract has been signed, order has been placed, pumps are scheduled for use beginning the week of April 3, 2006; staff education will begin the week of 3/27/06; pharmacy has a work session scheduled for April 2, 2006. Concerns about patient’s infusions being affected with the Verifuse Pump were discussed. There are only 76 pumps left down from 110 last December. Concerns expressed as to if the new pumps are viable with clinical trials (any protocols). The CADD was selected because it is used in many industry sponsored trials and it could be programmed for bar code usage.

II. **LEAN project update** – a three day retreat took place on February 21-23, over the three day span the following objectives were discussed: a. the current status/flow of the patient throughout the cancer center; b. looking at changes that could make the process flow better; c. ten different projects were developed with a leader assigned to each to develop plans to try and make the changes possible, Mike will be meeting with the leaders biweekly to discuss the progress of the projects.

III. **Zoledronic acid dosing** - Mat Smith joined the meeting to clarify questions about dosing and rate of administration. Per previous discussions with Mat, changes were made in COE to reflect dosing guidelines. Regina has developed a tool that reflects best practices in Zometa dosing. These guidelines will be reviewed with the nursing staff in the infusion unit and with the nurse practitioners.

IV. **Epoetin- Darbepoetin update** - Regina was not able to be present but wanted to know from the group if there had been any questions or issues with the use of the recently revised Aranesp algorithm. There were no specific issues/problems raised by the group except a question about timing of blood counts. Blood counts must be done monthly as stated in the algorithm and is consistent with requirements for Medicare reimbursement per Compliance Office.

V. **Antiemetic updates** - Jerry Younger and Regina will be on the agenda for the 3/28/06 MESAC Committee and will request that Aloxi and Emend be approved in the hospital formulary. That Committee may request that we develop a method of...
monitoring use of these two expensive drugs. Regina and Dr. Younger will report at the next Infusion Committee meeting.

VI. **Rituximab accelerated infusions** - Dr. Hochberg reported that there is evidence to suggest that Rituxan could be administered safely at higher mg/ml dose rate than recommended in the product insert. Dr. Hochberg will give a presentation to the Infusion Unit on Lymphoma on Thursday and will address the issue.

VII. **ONS in Boston** - Joanne discussed that from May 4-7 the ONS will be held in Boston, she would like to give as many nurses the opportunity to attend, mentioned the possibility of holding new patients on that Thursday & Friday, the ideas will be presented at the next Division meeting.
MGH, Stryker, and Premise
January 13, 2007

Presentation overview
Goal: provide you all an overall sense of how a large institution like MGH makes decisions and what it takes to successfully implement new technology.

- Why Stryker:
  - Decision Making Process
  - Implementation Process
  - What MGH looks for from Stryker
- Capacity Management
  - Why Premise
  - The BMD
- Stryker and Premise together

Massachusetts General Hospital
902 Bed Harvard Teaching Hospital

- Last Year:
  - 35,000 OR cases
  - 78,000 ED visits
  - 2,500 nurses
- Consistently in the top 3 in the US News and World Report ranking of top hospitals
  - Massachusetts’ first Nursing Magnet Hospital
  - Cutting edge patient care, education, and research since 1811

And until 2006 MGH had 100% Hill Rom beds

MGH Constraints
- Limited capital resources and a limitless capital appetite:
  - IT, new facilities, imaging, and existing facility upgrade & maintenance garner the lion’s share of the MGH capital budget
  - Took a concerted 2 to 3 year effort to receive the multi-million dollar bed funding.
- Limited institutional ability to change: only so many major projects can be implemented in a given year.
- Bottom line: Only one very high visibility opportunity to make a decision on and successfully implement new beds.
- And MGH’s patients and staff will live with the decision for the next 10 to 15 years.

Current reality: 2004
- Bed frames are no longer reliable (13+ years old)
- Mattresses (both standard and pressure-relieving) need replacement (5 to 10 years old)
- Patient care areas experience a shortage of both patient and visitor chairs, and the chairs that remain are often unsightly
- All of the above lead to patient and visitor dissatisfaction, staff frustration, potential safety and treatment risks, and a visually unappealing environment
Attachment 1.5.c continued

2004

- Goal: Replace the suite of patient room furniture with an adequate supply of new, reliable and consistent furnishings
- Provide enhanced functionality
  - Bed exit alarms
  - Bed scales
  - Pressure-relieving mattresses
- Replace beds, mattresses, chairs and tables house-wide (except ICU beds)

MGH Decision Making

- At MGH clinicians are the true decision makers, not Administration, Corporate Purchasing, etc.
- The MGH bed decision was clearly made by Nurses with strong input from support staff, Support Departments, and Finance.... In that order.

Decision-making/ Trial Process

- Clinical Team: Initial product review
  - Sample beds and tables arrived Spring 2004
  - Clinicians determined specific bed configurations to trial
- Trials conducted on 3 different units over Summer 2004
  - White 10, White 12 & Ellison 18 – one month each, 20 trial beds
- Demo room for review/input from staff
  - Practice Committee, Quality Committee & Staff Nurse Advisory
  - Nursing staff and MGH leadership
- Concurrent with clinical trials
  - Operations analysis: B&G, ESD and Biomed: maintenance, repair, and reliability
  - Financial Analysis: Partners Purchasing and MGH Budget Office: pricing, warranty, etc.

Late 2004

October ’04: bed trials complete.
- Clinical recommendation:
  - Stryker
- Operational Recommendation:
  - Stryker
- MGH Financial Recommendation:
  - Stryker
- Open issue:
  - New FDA side rail entrapment guidelines: scheduled to be finalized April ’05. Stryker committed to shipping beds that meet new guidelines w/in 60 days of FDA ruling.

Implementation

- 827 new beds and overbed tables
- Literally thousands of staff members to train
- A truckload a week, virtually every week from 3/07 to 8/07
- Extremely limited dock space
- No dedicated staging area
- Severe elevator constraints
- Competing MGH organizational priorities
- And what proved to be the most intractable problem to solve; Boston traffic and lost drivers.

So what happened between the end of ’04 and early ’06?
- As always there was a little negotiation and contract work left to be done...
- But the 12 month delay was really due to:
  - 1. Waiting for the FDA
  - 2. MGH’s subsequent decision to wait for the IBed
It took a partnership between:
- MGH Nursing
- Stryker
- MGH Support Depts:
  - Buildings and Grounds
  - Materials Management
  - Biomedical Engineering
  - Environmental Services
  - Police & Security
- And the cooperation of the overall MGH community whose
dock and elevator access was impacted.

To successfully achieve delivery, installation and
removal starting at 5:00am and complete by 10:00am
the same day (and as early as 9:00)
Combined Leadership Meeting
April 3, 2007

Attendance

Nursing Directors:

Clinical Nurse Specialists:
Lillian Ananian RN, Mimi Bartholomay RN, Kathryn Beauchamp RN, Erin Cox RN, Vivian Donahue RN, Joanne Empoliti RN, Patricia Fitzgerald RN, Susan Gavaghan RN, Tina Gulliver RN, Sioban Haldeman RN, Marian Jeffries RN, Lauren Kattany RN, MaryLou Kelleher RN, Susan Kilroy RN, Janet Madden RN, Ann Martin RN, Charlene O’Connor RN, Marion Phipps RN, Susan Stengrevics RN, Jill Taylor Pedro RN, Lynda Tyer-Viola RN, Carol Tyksienski RN.

Operations Coordinators:
Ingrid Beckles, Keith Brinkley, Roberta Cross, Dan Dolan, Nancy Dorris, Patricia Galvin, Judy Pines, Lori Powers, Judy Sacco, Richard Tiberii, Melissa Thurston.

Associate Chiefs/Directors/Staff Specialists/Clinical Educators:
Chris Annese RN, Barbara Blakeney RN, Sheila Burke RN, Carol Camoose-Markus RN, Lin-Ti Chang RN, Hyangsook Choi RN, Stephanie Cooper, Brian French RN, Carol Ghiloni RN, Kathleen Gottbrecht RN, Dan Kerls, Rosemary O’Malley RN, Laura Rossi, Laura Sumner RN, Carla Welsh

Guests:

Recorder:
Nghi Huynh

<table>
<thead>
<tr>
<th>Topic/Presenter</th>
<th>Discussion and Follow up Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>JCAHO update</td>
<td>Carol reviewed the Tracer report for December 2006 though February 2007 with the Combined Leadership group. Since the reports are in color, one hardcopy will be distributed to each unit via the Nursing Director's mailbox on Bigelow 10.</td>
</tr>
<tr>
<td>Carol Camooseo-</td>
<td></td>
</tr>
<tr>
<td>Markus</td>
<td>file://i:\pcsldr\Combined_Leadership\2007_Attachments\04-03-07_Feb_2007_all_criteria_met.pdf</td>
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<tr>
<td></td>
<td>Stephanie Pusti and Donna Lawson are taking notes on the weekly audits.</td>
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Attached are the observation trends for the week of 3/25 through 3/31.

file://j:\pcsldr\Combined_Leadership\2007_Attachments\04-03-07_Trendswk3.25.doc

### Nursing Research Expo

Marcelo Sampang

**Research Day will be held on Tues., May 8th**
- Scientific Sessions featuring original research funded by the Yvonne L. Munn Nursing Research Awards (2 groups of researchers).
- Yvonne L. Munn Nursing Research Visiting Professor Dr. Cheryl Beck from the University of Connecticut. Dr. Beck will present a talk about cultivating a program of research and merging clinical practice into programs of research.

**Nursing Research Fair will be held on Wed., May 9th from 1-4pm under the Bulfinch Tent.**
- Posters will be exhibited with an opportunity to discuss with authors and investigators about research.

**Nursing Research Expo will be held on Wed., May 9th**
- Encourage staff nurses to attend as there will be opportunities for staffs to talk with nurse researchers about research questions and studies that they may be pondering or planning to conduct. Do not need to have a research proposal.
- Exhibitors from various components of the research machine within Patient Care Services, the hospital, and the community will be there.

For additional information, please refer to link below or contact Marcelo Sampang directly:
file://j:\pcsldr\Combined_Leadership\2007_Attachments\04-03-07_Nursing_RESEARCH_DAY_2007_PRESENTATION.ppt

### Large Volume Pumps

Dan Kerls

**Goal:**
- 99.9% Smart Pumps to support clinicians and patients

**Current Pump Status:**
- Harvard Syringe pumps converted to “Smart” Medex pumps in 10/05

**Current “dumb” old Pumps:**
- Large Volume Pumps (LVPs)
- PCA/Epidural

**Large Volume Pump Replacement:**
- Following research on all available pump manufacturers, MGH requirements definition, RFP, and vendor review.
- MGH conducted a large volume pump trial in February and March

**News Update:**
- MGH clinicians have chosen a new Large Volume Pump – The Sigma Spectrum Pump

**Next Steps:**
- Pump Steering Committee is working on an Implementation and Training Schedule and will keep everyone informed.
- FY1 – Ellen Kinnealey RN from Biomed will be contacting each clinical area re: accessories.

**Drug Library:**
Attachment 1.5.d continued

<table>
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<tr>
<th>Adult ICU, Code Call, General Care Adult, Oncology, OB, Blood Product Profile, Maintenance IV profile, etc. If we need to add new ones, please contact Ellen Kinnealey.</th>
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</thead>
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The next Combined Leadership Meeting will be held on April 17, 2007 at 10:00 a.m. in the O’Keeffe Auditorium.
MGH Pumps

- SMART Technology
  - Syringe pumps converted to SMART Medex pump in 10/05
- Pumps currently without SMART technology:
  - Large Volume Pumps – 3M, Acclaim, Gemini
  - PCA/Epidural

Many Thanks!

- MGH had a very successful large volume pump trial in February and March
- Thanks to: Susan Stengrevics, Aileen Tubridy, Colleen Snydeman, Vivian Donahue, Ellen Fitzgerald, Erin Cox, Sharon Bouvier, Mary Lou Kelleher, Judy Newell, Barbara Hill Pellegrini, Kelly Clark, Nancy Wyman, Cathy Griffith, Christine Grady McKee for their leadership and support on the trial units

LVP Pump Trial

- Ellison 9
- Ellison 10
- Ellison 14
- Ellison 17
- Blake 8
- Ellison 8
- Bigelow 14
- Vascular OR
- Neuro OR
- Cardiac OR
GREAT NEWS!!!!

- MGH clinicians have chosen a new Large Volume Pump:
  - The Sigma Spectrum Pump

Next Steps

- The Pump Steering Committee is working on Implementation and Training Schedules with the vendor and will be communicating this to everyone.
- Pumps should be ready for implementation in August
- Ellen Kinnealey will be speaking with each clinical area about accessories