FACILITIES STAFFING REQUIREMENTS FOR VHA

MEASURING PERFORMANCE OF FACILITIES AND FACILITIES MAINTENANCE TASK ANALYSIS

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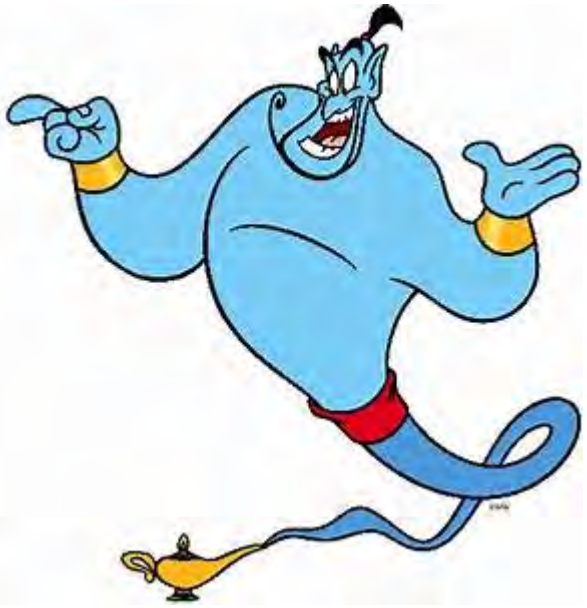
GENIE IN A LAMP



TWO POINTS I CONCLUDED

1. **There are too many variables to be able to set up a clean equation that will accurately identify resource requirements. Several assumptions need to be made.**
2. **Measures of performance need to be developed that are not effected by available resources. The measures need to focus on the knowledge base and processes for accomplishing the work not productivity. These are measurements for determining resource requirements not how well Facilities Departments are performing.**

EQUATION FOR PROJECTING COSTS

(**Units of work**) x (**Cost/unit of work**) / (**efficiency**) = **Appropriate Cost**

Each of the terms is a variable particularly when cost can be defined as FTE, contract costs or a combination of both .

In order to solve for 3 variables you need 3 equations. We only have one equations so we need to assume 2 of the variables to be constants. Efficiency can be assumed to be 100% representing a properly functioning department.

Cost/unit of work needs to become a constant. This would be done by first making a management decision as to what functions are contracted and which are done inhouse and what types of staff will be utilized.

GENERAL EQUATION FOR COSTS

(**Units of work**) x (**Cost/unit of work**) x (**efficiency**) = **Appropriate Cost**

Therefore, resources needed can not be determined until methods of accomplishing the work are first determined and then the units of work get plugged in.

Example: First determine if grounds maintenance will be done in house or by contract or a combination. Then plug in the number of acres, amount of paved surfaces, amount of trash removal required, estimated snow removal required, etc.

GENERAL EQUATION FOR COSTS

(**Units of work**) x (**Cost/unit of work**) x (**efficiency**) = Cost

Units of work can either be defined at the macro level or micro level.

Cost/unit of work can also be defined at the macro or micro level.

Efficiency can be defined as how well measures of performance are met.

UNITS OF WORK

Units of work can either be defined at the macro level or micro level.

Most staffing guidelines utilize macro measurements such as total square footage of a facility to determine the total number of FTE required.

Micro level measurements would require generating different units of work for electricians, plumbers, etc. This would be more accurate but more complicated to determine.

COST/UNIT OF WORK

Cost/unit of work can also be defined at the macro or micro level.

Whether macro or micro costs/units of work are used would be determined by which method is used for units of work.

Cost/unit of work could be determined by comparing to contracted costs or average of costs for similar work performed at similar facilities that meet JC and other requirements.

This becomes a comparison and not an absolute value. A correct value for cost/unit of work can only be determined to ±?%. Projecting accurate resource requirements will always be a range rather than an exact number.

(**Units of work**) x (**Cost/unit of work**) / (**efficiency**) = **Appropriate Cost**

90 percentile=±FTE ±$ = ±5FTE ±$50,000

EFFICIENCY

Efficiency can be defined as how well measures of performance are met.

Measures of performance for this purpose need to be developed based on the fact that there may not be sufficient resources to complete the work load.

For example wrench time per work order would be an accurate measurement regardless of available resources but back log of work orders would not be an accurate measure of efficiency since it is dependent on available resources.

MICRO VS MACRO STRATEGY

Identify each work category and determine multipliers to calculate the cost for that work at a specific medical center. Then add up all the costs for all of the work categories to determine the overall cost for that medical center's Facility Department.

GROUNDS MAINTENANCE MICRO EXAMPLE

	FTE X SALARY RATE	ALL OTHER COSTS	CONTRACT COSTS
MOWING		$	$
PLANTINGS			
TREE MAINTENANCE			
SNOW REMOVAL			
LEAF REMOVAL			
TRASH REMOVAL			
SIGNAGE			

GROUNDS MAINTENANCE MACRO EXAMPLE

	FTE X SALARY RATE	ALL OTHER COSTS	CONTRACT COSTS
SF of GRASS AREA		$	$
SF of PAVED AREA			

MAJOR FUNCTIONS FOR PERFORMANCE MEASURES, EFFICIENCY MEASUREMENTS

1. Management issues
2. Maintenance and operations
3. Regulatory compliance
4. Project management
5. Budget
6. Maintenance contract administration

1. MANAGEMENT ISSUES

- Training requirements
- Reporting to committees
- Annual personnel performance evaluations
- Performance improvement and annual performance evaluation reports to management
- Staffing

1. MANAGEMENT ISSUES

- Training requirements

Performance Measure: There needs to be a tracking system in place that insures each employee receives required training such as sexual harassment and technical training to improve their performance in their position requirements.

Employees not completing required training and/or not being given technical training will negatively effect overall Facilities performance.

1. MANAGEMENT ISSUES

- Reporting to committees

Performance Measure: As a member of a committee any action items assigned to you need to be tracked to insure that they are completed properly and timely.

As chairperson of a committee, minutes need to be completed immediately after the meeting and distributed so members a aware of action items assigned to them so they have sufficient time to report at the next meeting. Also, as chairperson you need to insure that all action items are assigned to one specific person and are tracked to completion.

Agendas need to be distributed along with meeting minutes clearly identifying action items and who has responsibility.

1. MANAGEMENT ISSUES

- Annual personnel performance evaluations

Performance Measure: Supervisors must be trained in how to properly prepare performance requirements and do evaluations. Evaluations need to be started sufficiently in advance to insure that time lines are met. Guidance for policy on awards needs to be clearly communicated to supervisors.

1. MANAGEMENT ISSUES

- Performance improvement and annual performance evaluation reports to management

Performance Measure: These reports must specify specific actions to be taken, one individual who will be assigned responsibility to complete the action and a timeline for completion. Then each item needs to be tracked to completion or modified if it is determined that the item can not be accomplished.

BAD EXAMPLE: Engineering will improve completion rates for work orders.

1. MANAGEMENT ISSUES

- Staffing

Performance Measure: At least annually, workloads and staffing should be reviewed to determine if there should be changes in staff to improve efficiency.

Examples might include creating an upward mobility position for hard to fill positions that will become vacant in a few years, or conversion of a position to create an electrician position.

2. MAINTENANCE AND OPERATIONS

- Work order system
- Equipment inventory
- Energy management

2. MAINTENANCE AND OPERATIONS

- Work order system
  - ~~Corrective maintenance completion %~~
  - ~~Corrective maintenance turn around time~~
  - Corrective maintenance wrench time
  - Feedback from customers

  - ~~PM completion %~~
  - ~~PM % completed on schedule~~
  - PM schedules are appropriate

2. MAINTENANCE AND OPERATIONS

- Work order system
  - ~~Corrective maintenance completion %~~
  - ~~Corrective maintenance turn around time~~
  - Corrective maintenance wrench time

  Performance Measure: There needs to be a system in place for tracking completion rates and other work order statistics. There need to be benchmarks for each measurement and corrective actions initiated when the benchmarks are not met.

2. MAINTENANCE AND OPERATIONS

- Work order system
  - Feedback from customers

  Performance Measure: The work order system should have a system to receive feedback from customers on how satisfied they were with the work performed. These need to be analyzed for any immediate corrective action required or trending that requires corrective action.

2. MAINTENANCE AND OPERATIONS

- Work order system
  - ~~PM completion %~~
  - ~~PM % completed on schedule~~
  - PM schedules are appropriate

  Performance Measure: There needs to be a system in place for tracking completion rates and other work order statistics. There need to be benchmarks for each measurement and corrective actions initiated when the benchmarks are not met.

  For those PMs that must be completed on schedule there needs to be a system to flag work orders that are nearing their due dates and have not been completed yet to insure that they get completed on schedule.

2. MAINTENANCE AND OPERATIONS

- Equipment inventory

  Performance Measure: New equipment must be entered with proper information.

  Excessed equipment must be deactivated from the inventory system.

  Need to be able to generate reports identifying equipment status relative to useful life expectancy.

2. MAINTENANCE AND OPERATIONS

- Energy management

  Performance Measure: Needs to be able to identify energy usage goals and action items to meet those goals.

3. REGULATORY COMPLIANCE

- JC/CMS
- Nuclear Medicine
- OSHA
- EPA
- IG reports

3. REGULATORY COMPLIANCE

Performance Measure:

- Identify deficiencies
- Identify corrective action
- Assign one person as responsible for completing corrective action
- Track to completion
- ~~Demonstrate successfully passing inspections~~

4. PROJECT MANAGEMENT

- Project submissions
- Contract obligations
- Design and construction schedules
- Budget
- Activation
- Strategic Capital Investment Planning

4. PROJECT MANAGEMENT

- Project submissions

Performance Measure: Are you continuously ready to submit project requests that are accurate and the highest priority or most appropriate project?

4. PROJECT MANAGEMENT

- Contract obligations

  Performance Measure: Submit orders to contracting with sufficient lead time for contracting processes.

4. PROJECT MANAGEMENT

- Design and construction schedules

  Performance Measure: Maintain a scheduling system that identifies key dates.

4. PROJECT MANAGEMENT

- Budget

  Performance Measure: Maintain a system that will accurately identify available budgets and obligations.

4. PROJECT MANAGEMENT

- Activation

Performance Measure: Maintain a system that identifies activation needs and associated costs.

5. BUDGET

- Obligations and balances
- Annual budget submission

5. BUDGET

- Obligations and balances

Performance Measure: Maintain a tracking system which identifies available funds balances and obligations.

5. BUDGET

- Annual budget submission

Performance Measure: Maintain an ongoing system to be able to project future budget needs.

6. MAINTENANCE CONTRACT ADMINISTRATION

- Obligation schedules
- Scope accuracy
- Verifying compliance by COTR
- Evaluation for conversion to inhouse

6. MAINTENANCE CONTRACT ADMINISTRATION

- Obligation schedules

Performance Measure: Maintain a system which projects schedules for renewals for maintenance contracts

6. MAINTENANCE CONTRACT ADMINISTRATION

- Scope accuracy

  Performance Measure: Maintain a system which routinely schedules reviews of contract scopes for accuracy.

6. MAINTENANCE CONTRACT ADMINISTRATION

- Verifying compliance by COTR

Performance Measure: Maintain a system for providing training and review of COTR performance.

6. MAINTENANCE CONTRACT ADMINISTRATION

- Evaluation for conversion to inhouse

Performance Measure: Maintain a system for reviewing contract maintenance prior to renewal tor more efficient methods of contracting or conversion to in house.

MANAGEMENT BY WALKING AROUND

- Management by walking around doesn’t typically get reported on management reports or show up on dashboards by is a very good way of measuring Facility employee performance and customer satisfaction.

ADMINISTRATIVE ASSISTANT

- Establishment of an administrative assistant position can be very effective in managing your QA program. 3 major duties would include
  - Tracking and identifying all employee training
  - Tracking budget, contracting and staffing
  - Preparing various QA reports
- This frees up supervisors and technical staff to do supervision and spend more time on technical issues rather than administrative duties

OTHER ISSUES IMPACTING COSTS, STAFFING AND EFFICIENCY

- Differences and similarities between VA and private hospitals
- Staffing with generalists vs specialists
- Area maintenance program
- Facility layout
- Facility age
- Facility functions

OTHER ISSUES IMPACTING COSTS, STAFFING AND EFFICIENCY

- Differences and similarities between VA and private hospitals

Differences:

- No CMS inspections at VA facilities
- No fire department inspections routinely done at VA facilities
- Construction permits not required at VA for minor work
- No IG inspections at private hospitals
- At private facilities safety, emergency management, biomed and construction are separate departments
- Private hospitals don't understand the difference between real estate management and running a medical center facility department.

OTHER ISSUES IMPACTING COSTS, STAFFING AND EFFICIENCY

Differences:

- VA has special types of patients and research programs that are not typically found at other hospitals
- VA has a very large number of facilities and resources allowing it to be on the cutting edge of issues such as distributed outpatient clinics, CAD designs, treatment of spinal injuries and PTSD, suicide prevention, construction specification development, etc.
- Contracting methods are different
- VA energy conservation programs are structured better.

Similarities:

- All facilities departments do the same type of work for maintenance

OTHER ISSUES IMPACTING COSTS, STAFFING AND EFFICIENCY

- Staffing with generalists vs specialists

When a facility department staffs itself heavily with generalists it tends to contract out for more electrical and mechanical types of work. Also, it is not as capable of maintaining an institutional knowledge base of how the building systems were designed and function.

OTHER ISSUES IMPACTING COSTS, STAFFING AND EFFICIENCY

- Area maintenance program

An area maintenance program is less efficient than a task order system. It does provide for a high level of user satisfaction. This is due to the daily face to face interactions between Facilities staff and users.

Area maintenance programs give the impression of providing easy and immediate response to problems. In reality, however, mechanics usually only visit each area once a day and often travel to a clipboard to find nothing written on it.

A work order system that allows for simple requesting of work from any computer provides faster and more efficient responses.

OTHER ISSUES IMPACTING COSTS, STAFFING AND EFFICIENCY

- Facility layout

  Campus type facilities require more travel time resulting in less wrench time. Also, more resources need to be allocated to grounds maintenance.

  Campus facilities may tend to be less energy efficient than high rise facilities.

OTHER ISSUES IMPACTING COSTS, STAFFING AND EFFICIENCY

- Facility age

  Older facilities will tend to require more resources due to a greater accumulation of building equipment that has reached and passed it life expectancy.

  New facilities are more technologically advanced and require staff with higher skill levels.

OTHER ISSUES IMPACTING COSTS, STAFFING AND EFFICIENCY

- Facility functions

A tertiary care facility with advanced research activities requires more support and better skilled mechanics than a nursing home, psychiatric or rehabilitation facility. Typical differences might include isolation ICU rooms, emergency management of isolation patients during a disaster, BSL3 facilities and pharmaceutical preparation labs.

PRIMARY POINTS

1. **There are too many variables to be able to set up a clean equation that will accurately identify resource requirements. Several assumptions need to be made.**
2. **Measures of performance need to be developed that are not effected by available resources. The measures need to focus on the knowledge baseand processes for accomplishing the work not productivity.**

QUESTIONS