



Costs, Budgets and Reporting

**Presented to
Maine Center for Public Health
Basics of Non-Profit Finance Series
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Agenda

- Costs
 - Full costing
 - Differential costing
 - Responsibility costing
- Budgets
 - Operating budgets
 - Capital budgets
 - Cash flow budgets
 - Grant and contract budgets
- Reporting



Full costing

- What did it cost?
- Cost objects
- Cost centers
- Cost allocation



Goal of full costing

- Measure the resources used in producing a particular service



Purposes of full costing

- Price setting
- Profitability assessment
- Cost control
- Comparative analysis
- External reporting



Cost objects

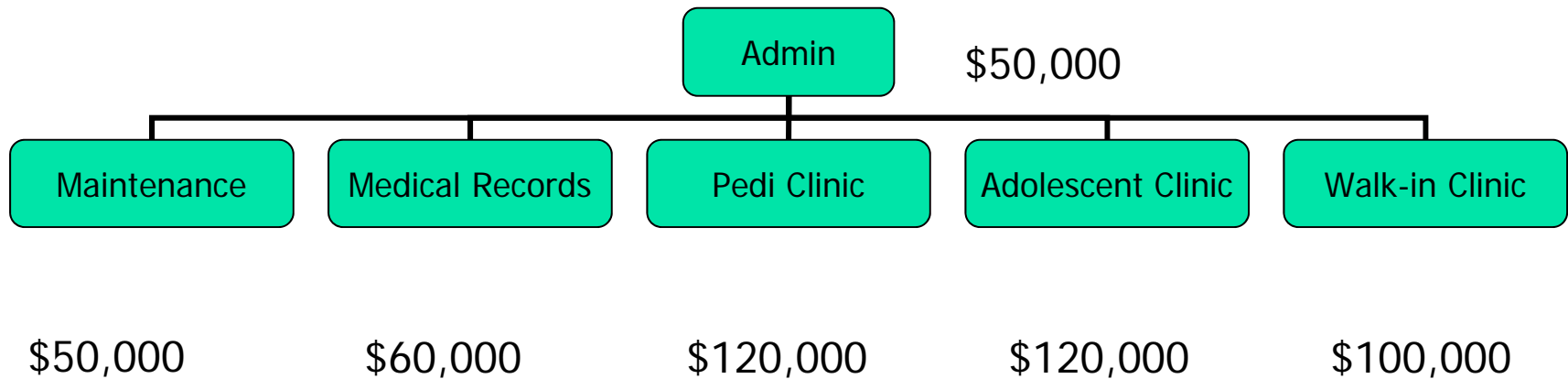
- The unit of output for which we want to know the full cost
- Examples: what is the cost?
 - a day of care in the hospital
 - the entire stay
 - a day of care in the hospital according to the patient's diagnosis



Cost centers

- Organizational units for purposes of accumulating costs
- Mission centers associated with the hospital's main purpose (e.g., pediatrics department)
- Service centers support the activities of the mission centers (e.g., medical records)

Assign direct costs to a cost center





Allocate service center costs

- The full cost of a mission center is its direct costs plus its share of the costs of the service centers
- Choose a basis of allocation using a measure that reflects the use of the service center by the mission centers (e.g., square feet). This is not a perfect measure.
- Select a method of allocation (e.g., direct allocation or step-down method)



Methods of allocation

- Direct method: service center costs are allocated to mission centers only
- Step-down method: service center costs are allocated to other service centers and then to mission centers

Direct allocation

- bases of allocation

Allocation bases					
Admin based on total direct expenses			Medical records based on number of visits		
Maint	-	0%	Pedi	5,000	56%
Med Rec	-	0%	Adol	2,500	28%
Pedi	120,000	35%	Walk-in	<u>1,500</u>	<u>17%</u>
Adol	120,000	35%		9,000	100%
Walk-in	<u>100,000</u>	<u>29%</u>			
	340,000	100%			
Maintenance based on square footage			Full cost per visit		
Med Rec	-	0%	Pedi	\$ 38.36	
Pedi	2,500	42%	Adol	\$ 68.39	
Adol	2,000	33%	Walk-in	\$ 91.47	
Walk-in	<u>1,500</u>	<u>25%</u>			
	6,000	100%			
			Average cost per visit	\$ 55.56	



Direct allocation

	<u>Admin</u>	<u>Maint</u>	<u>Med Rec</u>	<u>Pedi</u>	<u>Adol</u>	<u>Walk-in</u>	<u>Total</u>
Direct costs	\$ 50,000	\$ 50,000	\$ 60,000	\$ 120,000	\$ 120,000	\$ 100,000	\$ 500,000
Admin	(50,000)	-	-	17,647	17,647	14,706	-
Maint		(50,000)	-	20,833	16,667	12,500	-
Med Rec			(60,000)	33,333	16,667	10,000	-
Pedi							
Adol							
Walk-in							
Total	\$ -	\$ -	\$ -	\$ 191,814	\$ 170,980	\$ 137,206	\$ 500,000

Step-down

- bases of allocation

Allocation bases							
Admin based on total direct expenses			Medical records based on number of vis				
Maint	50,000	11%		Pedi	5,000	56%	
Med Rec	60,000	13%		Adol	2,500	28%	
Pedi	120,000	27%		Walk-in	<u>1,500</u>	<u>17%</u>	
Adol	120,000	27%			9,000	100%	
Walk-in	<u>100,000</u>	<u>22%</u>					
	450,000	100%					
Maintenance based on square footage			Full cost per visit				
Med Rec	1,000	14%		Pedi	\$ 38.92		
Pedi	2,500	36%		Adol	\$ 67.97		
Adol	2,000	29%		Walk-in	\$ 90.30		
Walk-in	<u>1,500</u>	<u>21%</u>					
	7,000	100%		Average cost per vis			\$ 55.56



Step-down allocation

	<u>Admin</u>	<u>Maint</u>	<u>Med Rec</u>	<u>Pedi</u>	<u>Adol</u>	<u>Walk-in</u>	<u>Total</u>
Direct costs	\$ 50,000	\$ 50,000	\$ 60,000	\$ 120,000	\$ 120,000	\$ 100,000	\$ 500,000
Admin	(50,000)	5,556	6,667	13,333	13,333	11,111	-
Maint		(55,556)	7,937	19,841	15,873	11,905	-
Med Rec			(74,603)	41,446	20,723	12,434	-
Pedi							
Adol							
Walk-in							
Total	\$ -	\$ -	\$ -	\$ 194,621	\$ 169,929	\$ 135,450	\$ 500,000



Attach the mission center costs to cost objects

- When all units of output are the same, divide by the number of units produced
- When units of output are different, the cost needs to be allocated to specific types of output (all visits vs. visit by type)



Important assumptions for step-down

- Rank the service centers in order of their use
- Only service center costs are allocated
- Allocations are done in one direction
- Allocation basis attempts to measure the use of the resources by the other cost centers
- Full cost includes the direct costs and a portion of allocated costs
- Total costs of the organization do not change

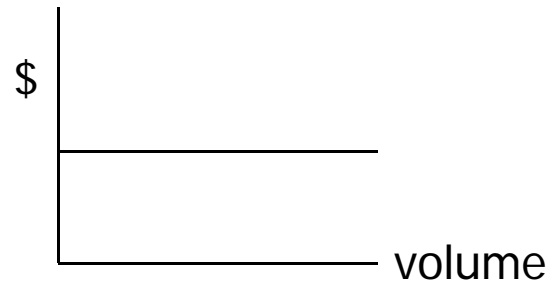


Differential Cost Accounting

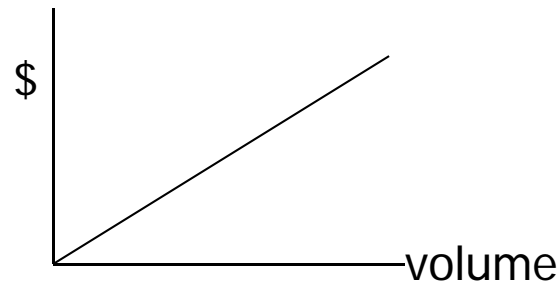
- Cost behavior
- Cost-volume-profit analysis
- Decision-making analyses

Cost behavior

- Fixed costs do not vary with changes in activity volume

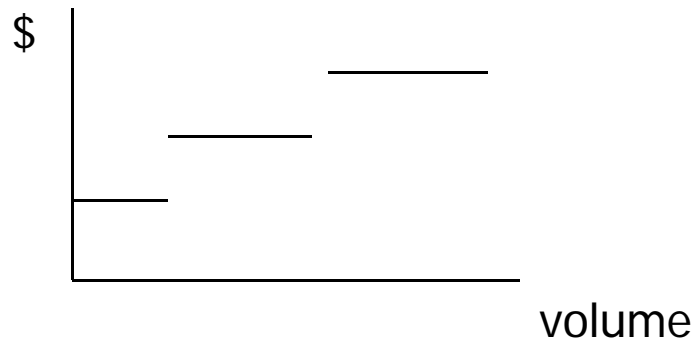


- Variable costs change directly with changes in activity volume

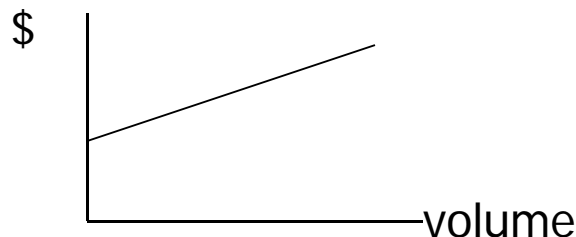


Cost behavior

- Step-function costs vary within small ranges of activity



- Semi-variable costs (mixed costs) – there is a minimum level of cost that is fixed and then costs rise with increases in activity





Describe the following costs

- Rent
- Medical supplies
- Electricity
- Nursing salaries
- Physician salaries
- General manager



Cost-volume-profit analysis

- Purpose: to determine the volume of activity needed to generate a profit goal or the price needed to achieve a profit goal
- Profit = Total revenue - Total costs
- Profit = (price times volume) - (fixed costs + variable costs)
- Profit = (price times volume) - [fixed costs + (unit variable cost times volume)]
- Profit = $px - (a + bx)$
- Breakeven means total revenue = total costs



Example of breakeven analysis

The administrator of a local hospital is considering offering mammography screenings. The projected revenues and costs are:

Price per screening		\$90
Equipment with a useful life of 10 years		\$60,000
Technicians' salaries		\$60,000
Costs per screening:		
Supplies	\$25	
Developing	\$10	



Mammography breakeven

1. Annual volume to breakeven:

$$0 = 90x - (66,000 + 35x)$$

$$x = 1,200$$

2. Annual volume to generate a \$22,000 profit:

$$22,000 = 90x - (66,000 + 35x)$$

$$x = 1,600$$

3. Price required if volume is only 1,000 and no profit is required:

$$0 = 1000p - (66,000 + 35000)$$

$$p = \$101$$



Contribution margin

- Revenue minus variable expenses
- Contribution towards the fixed costs
- Example:

Revenue	\$144,000
Variable costs	<u>56,000</u>
Contribution margin	88,000
Fixed costs	<u>66,000</u>
Net income	\$ 22,000



Alternative decision making: add/drop decision

Augusta Women's Center offers bone densitometry scans in the office as a convenience to patients. The Center's outpatient volume is increasing and the administrator is considering dropping the bone densitometry service and converting the space to an outpatient exam room.



Augusta Women's Center

You are given the following information:

Number of scans per year	425
Reimbursement for bone scan	\$ 65
Supplies cost per scan	\$ 15
Part-time bone scan technician	\$15,000
Reimbursement for office visit	\$ 80
Supplies cost per office visit	\$20
Expected increase in outpatient volume if additional exam room is available	500 visits



Augusta Women's Center

Should the bone scan service be continued or dropped in favor of the outpatient exam room?

	Status Quo <u>Bone scan</u>	Alternative <u>Office visit</u>
Revenue	\$ 27,625	\$40,000
Variable costs	<u>6,375</u>	<u>10,000</u>
Contribution margin	21,250	30,000
Fixed costs	<u>15,000</u>	<u>0</u>
Product margin	\$ 6,250	\$30,000



Budgets and Variance Analysis

- Planning and control
- Responsibility centers
- Operating budget
- Capital budget
- Cash flow budget
- Variance analysis



Planning and control

- Strategic plan- where we are now, where we want to be in the future, how we will get there, including goals and objectives
- Management control includes
 - Programming
 - Budgeting
 - Operating and measuring
 - Reporting and evaluating
- Task control includes the daily activities needed to accomplish goals and objectives



Programming and budgeting

- What programs does your agency have?
- Operating budget - a monetary description of the agency's programs that reflects sources and uses of resources. Usually for a one year period.
- Actual results are compared to this plan to report on and measure financial performance



Responsibility centers

- Which organizational units are responsible for these programs?
- Programs are assigned to responsibility centers so that individual managers can be held accountable for managing the programs
- The executive director is responsible for the entire agency, but can she manage every program/department?



Importance of budgets

- Many costs are discretionary – amounts depend on management decisions. In health care, these may vary within certain limits depending on the patient volume and mix of services
- Revenues will vary depending on the patient volume and mix of services, but also depending on third-party payments, government appropriations, contracts, and donations



Budget formulation and monitoring

- Formulation
 - Mechanical aspect – estimating revenues and expenses
 - Behavioral aspect – management commitment to achieving certain results, both strategic and financial. Managers should be involved in the preparation. Budget allows communication among departments.
- Monitoring for understanding performance and assessment



Components of operating budgets

- Revenues
 - Third-party payments
 - Contracts
 - Other sources (e.g., government appropriation, patient fees, donations)
- Expenses
 - Line-item budget focuses on expenses (e.g., salaries and wages, benefits, supplies)
 - Link to capital budget for buildings and equipment



Steps in the budgeting process

- Disseminate guidelines/ assumptions to managers
- Cost centers prepare their expense budgets, including assumptions and justifications
- Profit centers prepare both revenue and expense estimates, including assumptions and justifications
- Prepare the master budget to combine all departments



Capital budgets

- Summary of major capital purchases
- Benefit over several years
- Methods of selection
 - Written justification – strategic, regulatory, competitive, quality reasons
 - Financial analysis – projected cash flows
- Prioritization
- Financing – internal vs. external



Financial feasibility

- Payback method – the number of years of net cash inflow that are needed to recover the investment
- Net present value – incorporates the time value of money by calculating the present value of future cash flows versus the amount of the investment
- Internal rate of return – the effective rate of return on the investment



Cash flow budget

- Accrual basis needs to be converted to cash basis to determine cash surplus and/or shortfall
- Combination of operating and capital budgets



Traditional variance analysis

- Compare actual to budget amount
- For expenses
 - if actual < budget Favorable
 - if actual > budget Unfavorable
- For revenues
 - if actual > budget Favorable
 - if actual < budget Unfavorable
- Reasons for all significant variances should be explained and corrective action taken if appropriate



Variance analysis

- Volume
 - $(\text{Budgeted volume} - \text{Actual volume}) * \text{Average fixed cost per unit}$
- Rates/ prices paid for inputs
 - $(\text{Actual price} - \text{Budgeted price}) * \text{Actual quantity}$
- Usage/ quantities of inputs
 - $(\text{Actual quantity} - \text{Budgeted quantity}) * \text{Budgeted price}$



Thoughts to consider

- Variance analysis helps, but does not completely explain
- Hold managers responsible for costs which they can control
- Role of support departments
- Strategic vs. financial objectives
- What are the incentives for managers?
- Reporting systems



Grant and contract budgets

- **Direct**
 - Personnel expenses (salaries/wages, fringe benefits)
 - Equipment – useful life > 1 year and cost in excess of organization's capitalization level or \$5,000 (whichever is less)
 - Sub-recipient awards
 - All other expenses
 - Occupancy (depreciation, interest, rent), utilities/heat, telephone
 - Maintenance/minor repairs
 - Equipment rental/ leasing, depreciation
 - Materials and supplies
 - Consultants, independent public accountant
 - Technology services/ software
- **Indirect**
 - Overhead rate to cover costs that are necessary but not easily traceable to the grant/contract activities e.g., information system, utilities. Refer to A-122 methodologies
 - Limits



Grant and contract budgets

- Definitions of line items – reclassification?
- Direct costs can be easily traced; indirect cannot
- The more costs that are charged directly via specific identification or allocated directly, the less indirect costs there will be to be allocated
- Line item control vs. overall budget limit
 - Monthly explanations of variances
- How much variance before budget revision?



Grant and contracts

- Draw down of funds
- Control of sub-contractors
- Read the instructions
- Grant information system should tie to the general ledger accounting system



Federal and Maine reporting

Federal Form 990, 990-EZ, or 990-N
e-postcard

- Revisions in recent years to report much more detail
 - Governance, board of directors, conflicts of interest, executive compensation
- May require development of information systems and new policies
- <http://www.nonprofitmaine.org/> for information about preserving tax-exempt status. May 15 deadline