

Why and How to Conduct a Cost Analysis

Presenters: Stewart Landers and
Alexia Eslan, Senior Consultants at JSI

JSI Research & Training Institute, Inc.

- Stewart Landers and Alexia Eslan
- Public health consulting company
- CDC Capacity Building Assistance (CBA) provider

Objectives

- Identify your organization's purpose for conducting a cost analysis
- Learn how to set parameters for the scope of a planned cost analysis
- Have simple cost analysis and time study tools that can be utilized at your organizations
- Name the major steps in completing a cost analysis
- Begin to interpret results

Definition and Importance of a Cost Analysis

What is a Cost Analysis?

- 1) The act of breaking down a cost summary into its constituent [parts] and studying and reporting on each factor (*Merriam Webster Dictionary*)
- 2) The accumulation, examination, and manipulation of cost data for comparisons and projects (*BusinessDictionary.com*)

What Does a Cost Analysis Do?

- It helps you determine your expenses related to the services you provide.
- It provides a tool to gather your expenses and tie them to the services you provide.

What is the Purpose for Conducting a Cost Analysis?

- Increases understanding of how to use funds
- Helps determine which services to focus on
- Helps set charges/fees
- Assists in negotiating charges with various payers

Benefits of a Cost Analysis

- Develop, implement and analyze efficiency
- Control costs
- Project incremental costs
- Financial viability
- Successful contract management

Decisions Prior to Starting a Cost Analysis

Cost Analysis Decision Tree

Use this tool to determine the purpose and scope of your cost analysis.

Start



Why do you need a cost analysis?

To bill for services

To manage the budget

For strategic planning

For advocacy

If so, are you...

If so, why?

If so, why?

If so, are you...

Contracting with a medical provider/clinic?
Determine value of service to negotiate reimbursement rate*

Billing third party payers?
Determine value of service to negotiate reimbursement rate*

Billing Medicaid and/or Medicare?
Rates are set by the State HHS. Changing rates requires advocacy

It's good business
Important to know your true costs; helps you keep within budget

For funding purposes
Budgeting for grant and other proposals; shows you have done your homework

Increasing/decreasing services
Assist you with future planning

Changing focus
Determine if it makes sense to make the change/addition

Making policy changes?
Changing Medicaid reimbursement rates

Forming coalitions?
Joining forces with other CBOs around payment reform

Conduct a Unit Specific Cost Analysis

Conduct a program or agency-wide cost analysis

Conduct a unit specific, program or agency-wide cost analysis

Decision Tree Tool

- Scope of the cost analysis:
 - All services
 - All HIV services
 - Only HIV prevention services
 - Specific program services (HIV testing, HIV education)

Cost Allocation

Cost Allocation

- Allocating direct expenses
 - Salaries
 - Wages
 - Fringe benefits
 - Consultants
 - Supplies (HIV tests)
 - Publications
 - Travel
 - Etc.

Cost Allocation

- Allocating indirect expenses
 - Utilities
 - Rent
 - Audit and legal
 - Administrative staff
 - Equipment rental

Cost Allocation

- Allocation of staff
 - Each and every person
 - Time study

Cost Allocation

- Allocation of In-kind and Staff Volunteers
 - Staff volunteers
 - In-kind administration, facilities, equipment, supplies

Completing a Cost Analysis

Cost Analysis Tools

- Program Cost Analysis (PCA) Tool
- Unit Cost Analysis Tool
- Staff Time Allocation Tool
- Time Study Tool

Program Cost Analysis (PCA) Tool

- Assists in determining costs for entire HIV prevention program compared to all agency costs
- Good for budgeting, strategic planning and advocacy

Cost Analysis Decision Tree

Use this tool to determine the purpose and scope of your cost analysis.

Start



Why do you need a cost analysis?

To bill for services

To manage the budget

For strategic planning

For advocacy

If so, are you...

If so, why?

If so, why?

If so, are you...

Contracting with a medical provider/clinic?
Determine value of service to negotiate reimbursement rate*

Billing third party payers?
Determine value of service to negotiate reimbursement rate*

Billing Medicaid and/or Medicare?
Rates are set by the State HHS. Changing rates requires advocacy

It's good business
Important to know your true costs; helps you keep within budget

For funding purposes
Budgeting for grant and other proposals; shows you have done your homework

Increasing/decreasing services
Assist you with future planning

Changing focus
Determine if it makes sense to make the change/addition

Making policy changes?
Changing Medicaid reimbursement rates

Forming coalitions?
Joining forces with other CBOs around payment reform

Conduct a Unit Specific Cost Analysis

Conduct a program or agency-wide cost analysis

Conduct a unit specific, program or agency-wide cost analysis



Program Cost Analysis Tool

Organization Name: _____
Time Frame For Data: _____

Note: Enter data in the yellow areas only, the green areas will calculate automatically.

(A)	Assembling HIV prevention program costs				
	Total Organization Costs (B)	Direct program costs (C)	Indirect program costs (D)	In-Kind contributions for program costs (E)	Total program cost (F)
A. ADMINISTRATIVE:					
1. Executive Director/CEO					\$
2. Administrator/COO					\$
3. Administrative Support					\$
4. Finance Director/CFO					\$
5. Fiscal Support					\$
6. Medical Director					\$
7. Public Relations/Marketing					\$
8. Legal					\$
9. Data Processing					\$
10. Staff Travel					\$
11. Telephone					\$
12. Postage					\$
13. Operating Interest					\$
14. In Service & Staff Education					\$
15. Office Supplies					\$
16-22. Other Allowable Admin. Exp. (specify below):					
					\$
					\$
					\$
					\$
					\$
					\$
					\$
					\$
					\$
TOTAL ADMINISTRATIVE	\$ -	\$ -	\$ -	\$ -	\$ -

Components of PCA

- Administrative
- Patient Transportation
- Medical
- Laboratory
- Pharmacy
- Other Health Services
- Other Non-direct Health Services
- Employee Health and Welfare
- Facility Costs



Program Cost Analysis Tool

Organization Name: _____
 Time Frame For Data: _____

Note: Enter data in the yellow areas only, the green areas will calculate automatically.

(A)	Assembling HIV prevention program costs					Notes
	Total Organization Costs (B)	Direct program costs (C)	Indirect program costs (D)	In-Kind contributions for program costs (E)	Total program cost (F)	
A. ADMINISTRATIVE:						
6b. Start-Up					\$ -	
6c. Organizational					\$ -	
7. Gas					\$ -	
8. Electric					\$ -	
9. Water					\$ -	
10-13 Other Allowable Exp. (specify below):						
					\$ -	
					\$ -	
					\$ -	
					\$ -	
<i>TOTAL FACILITY COSTS</i>	\$ -	\$ -	\$ -	\$ -	\$ -	
TOTAL COSTS	\$ -	\$ -	\$ -	\$ -	\$ -	

TOTAL OUTSIDE LAB COSTS

\$ -

PCA Example



Program Cost Analysis Tool

Organization Name: TEXAS HIV/AIDS SERVICES
 Time Frame For Data: JANUARY - DECEMBER 2013

Note: Enter data in the yellow areas only, the green areas will calculate automatically.

(A)	Assembling HIV prevention program costs				
	Total Organization Costs (B)	Direct program costs (C)	Indirect program costs (D)	In-Kind contributions for program costs (E)	Total program cost (F)
A. ADMINISTRATIVE:					
1. Executive Director/CEO					\$ -
2. Administrator/COO					\$ -
3. Administrative Support					\$ -
4. Finance Director/CFO	\$75,000.00	\$5,000.00	\$2,000.00		\$ 7,000.00
5. Fiscal Support					\$ -
6. Medical Director					\$ -
7. Public Relations/Marketing					\$ -
8. Legal					\$ -
9. Data Processing					\$ -
10. Staff Travel					\$ -
11. Telephone	\$2,000.00	\$400.00			\$ 400.00

Unit Cost Analysis Tool

- The cost of services is determined by the expenses and utilization
- Considers all of the resources associated a particular service and calculates how much it costs



Unit Cost Analysis Tool

This tool has been tailored from cost analysis tool develop by the American Academy of Family Physicians (www.aafp.org/fpm)

Organization Name: _____

Time Frame For Data: _____

Note: Do not enter data in the green areas, they will calculate automatically.

STEPS	NOTES	UNIT COST	IN-KIND CONTRIBUTIONS	UNIT COST with IN-KIND	COMMENTS
1. Define the unit of service:			N/A	N/A	
2. Determine the number of units of service provided in the defined time period:			N/A	N/A	
3. Calculate the direct costs:					
Staff Cost:				\$ -	
Management Cost:				\$ -	
				\$ -	
				\$ -	
				\$ -	
HIV Tests:	Per supply catalog			\$ -	
Laboratory Services:	Per typical charges			\$ -	
Other:				\$ -	
TOTAL direct costs per unit of service:		\$ -	\$ -	\$ -	
4. Calculate indirect costs:					
Rent, utilities, etc.:				\$ -	
Administrative salaries and benefits:				\$ -	
Insurance:				\$ -	
Other:				\$ -	
TOTAL:		\$ -	\$ -	\$ -	
Basis of Allocation:			N/A		
Allocation rate:	Percentage			0.00	
Number of units of service provided:	From Step 2 above	0.00	N/A	0.00	
Total indirect costs per unit of service		#DIV/0!		#DIV/0!	
5. Calculate depreciation					
Initial cost of equipment associated with the service:				\$ -	
Resale value at the end of its useful life:				\$ -	
TOTAL:		\$ -	\$ -	\$ -	
Estimated years the practice will use the equipment:				0.00	
Basis of Allocation:					
Allocation rate:	Percentage		N/A	0.00	

Unit Cost Analysis Steps

- Step 1: Define the unit of service
- Step 2: Determine the number of units of service provided
- Step 3: Calculate the direct costs
- Step 4: Calculate the indirect costs
- Step 5: Calculate depreciation
- Step 6: Calculate the unit cost

Define the unit of service

- What service do you want to focus on?
- How do you define a unit of this service?
- How can you “pull” the information?
- How do others define it?

Determine the number of units of service provided

- Practice Management System
- Database
- Audit

Calculate the direct costs

- Very important to unit cost analysis
- Largest cost: Staff Time
 - Use staff time allocation tool or time study tool
- Other cost information

Calculate the indirect costs

Common bases for allocation include:

- Ratio of selected service to all services
- % of total revenue attributed to the service
- % of practice square-footage devoted to the service
- % of total direct costs attributed to the service

Calculate depreciation

Straight-line depreciation:

Original value – Resale value = Depreciation Cost

Calculate the unit cost

Direct costs per unit + Indirect costs
per unit + Depreciation costs per unit =
Total Cost per Unit of Service

Unit Cost Analysis Example



Unit Cost Analysis Tool

This tool has been tailored from cost analysis tool develop by the American Academy of Family Physicians (www.aafp.org/fpm)

Organization Name: Truman Family Practice

Time Frame For Data: January - December 2013

STEPS	NOTES	UNIT COST	IN-KIND CONTRIBUTIONS	UNIT COST with IN-KIND
1. Define the unit of service:	An adult physical examination		N/A	N/A
2. Determine the number of units of service provided in the defined time period:	2,000 adult physical examinations in fi scal year 2002	2,000	N/A	N/A
3. Calculate the direct costs:				
Physician Cost:	Salary and benefits of \$150,000 per year ÷ 50 work weeks per year ÷ 40 work hours per week ÷ 60 minutes per hour = \$1.25 per minute x 15 minutes required	\$ 18.75		\$ 18.75
Nurse Cost:	Salary and benefits of \$45,000 per year ÷ 50 work weeks per year ÷ 40 work hours per week ÷ 60 minutes per hour = \$0.375 per minute x 10 minutes required	\$ 3.75		\$ 3.75
Receptionist Cost:	Salary and benefits of \$25,000 per year ÷ 50 work weeks per year ÷ 40 work hours per week ÷ 60 minutes per hour = \$0.208 per minute x 5 minutes required	\$ 1.04		\$ 1.04
Disposable resources:	Per supply catalog	\$ 5.50		\$ 5.50
Laboratory Tests:	Per typical charges	\$ 15.00		\$ 15.00
Other:				\$ -
TOTAL direct costs per unit of service:		\$ 44.04	\$ -	\$ 44.04
4. Calculate indirect costs:				
Rent, utilities, etc.:	Per Year	\$ 60,000.00		\$ 60,000.00
Administrative salaries and benefits:		\$ 50,000.00		\$ 50,000.00
Insurance:		\$ 90,000.00		\$ 90,000.00
Other:				\$ -
TOTAL:		\$ 200,000.00	\$ -	\$ 200,000.00

Unit Cost Analysis Example (cont.)



Unit Cost Analysis Tool

This tool has been tailored from cost analysis tool develop by the American Academy of Family Physicians (www.aafp.org/fpm)

Organization Name: Truman Family Practice

Time Frame For Data: January - December 2013

STEPS	NOTES	UNIT COST	IN-KIND CONTRIBUTIONS	UNIT COST with IN-KIND
Other:				\$ -
TOTAL:		\$ 200,000.00	\$ -	\$ 200,000.00
Basis of Allocation:	Percentage of total visits		N/A	
Allocation rate:	20 percent of patient visits in FY2002 were for adult physical exams	20.00%		0.20
Number of units of service provided:	From Step 2 above	2000	N/A	2,000.00
Total indirect costs per unit of service		\$20.00		\$20.00
5. Calculate depreciation				
Initial cost of equipment associated with the service:		\$ 50,000.00		\$ 50,000.00
Resale value at the end of its useful life:		\$ (10,000.00)		\$ (10,000.00)
TOTAL:		\$ 40,000.00	\$ -	\$ 40,000.00
Estimated years the practice will use the equipment:		10		10.00
Basis of Allocation:	Ratio of total visits		N/A	
Allocation rate:	20 percent of patient visits in FY2002 were for adult physical exams	20.00%		0.20
Number of units of service provided:	From Step 2 above	2,000	N/A	2,000.00
TOTAL depreciation per unit of service:		\$ 0.40		\$ 0.40
6. Calculate the unit cost:				
Total from step 3:		\$ 44.04	N/A	\$ 44.04
Total from step 4:		\$ 20.00		\$ 20.00
Total from step 5:		\$ 0.40		\$ 0.40
TOTAL cost per unit of service:		\$ 64.44		\$ 64.44

Interpreting Cost Analysis Results

- If applicable, compare to what you are currently billing or budgeting for services provided
- Compare unit costs of services provided
- Are you making a loss or profit?
- Can you afford to continue offering the same set of services?

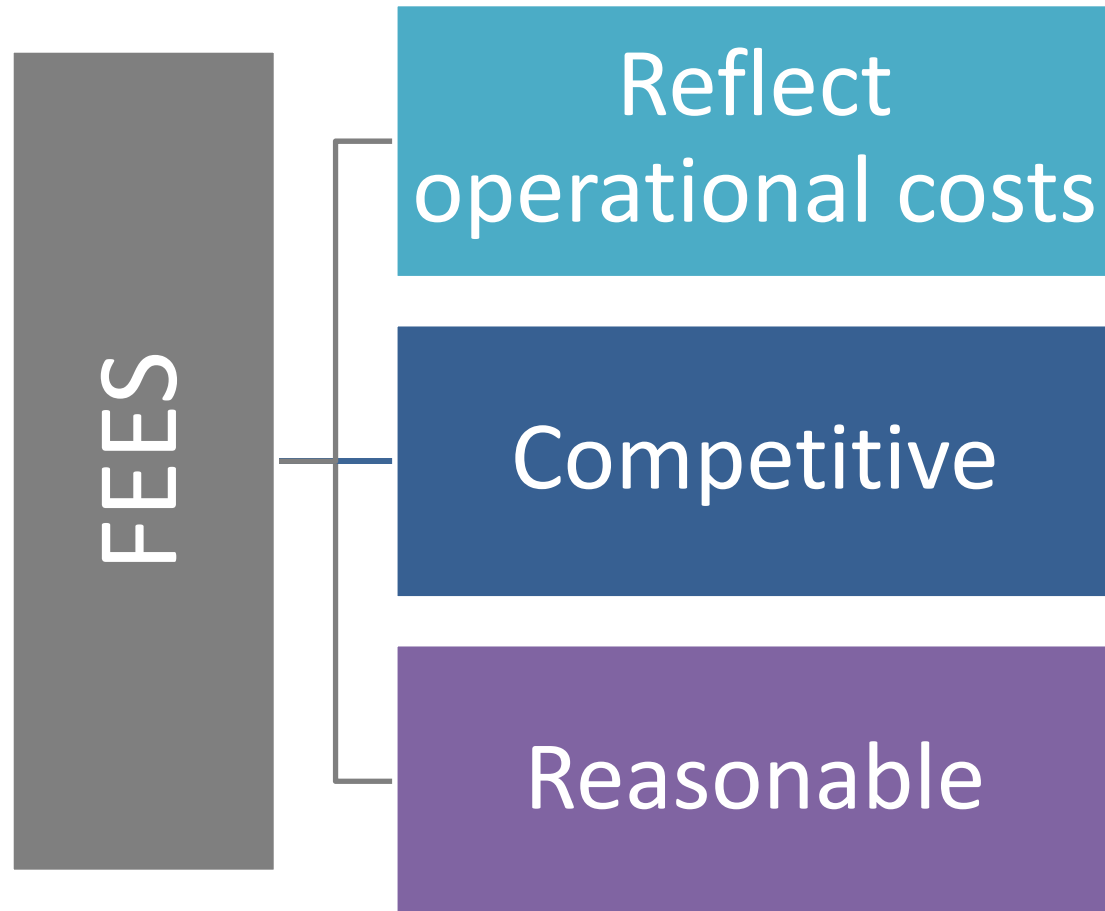
Review Market Rates

- What are the fees for comparable services in your area?
- Are you competitive?
- Do you offer more than, the same, or fewer services as other providers?
- What “discounts” are you offering and when?

If Billing...Establishing Fees

- The fee scale you establish will be based on the outcome of the cost analysis
- The cost analysis creates the “reasonable cost” of providing services
- The fee scale should generate sufficient income, along with other sources of revenue, to maintain the program

Developing Fees



Resources

- AAFP cost analysis article and tool:
<http://www.aafp.org/fpm/2004/0400/p41.html>
- CBA@JSI: <http://cba.jsi.com/>

Thank you!

You can download the tools from this webinar
or from our website (cba.jsi.com)