

Developing Your Cost Model Part 2

Nonprofit Association of Oregon

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Workshop Leader: **Kay Sohl**



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Try Again?



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Workshop Plan

- Full cost of services
- Dealing with allocated costs
- Unit costs
- Matching funds requirements
- Preparing to respond to RFPQ

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Your Role & Your Mood?



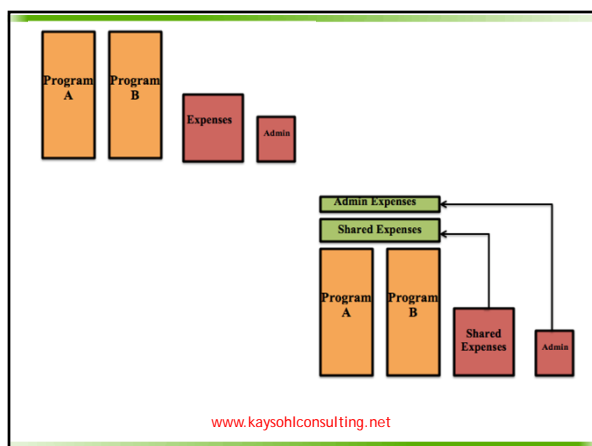


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Full Cost Calculation

Direct costs
+ Fair allocation of shared costs
+ Fair allocation of admin costs
=
Full Cost

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Full Cost of Each Program

- **Direct Cost:** cost directly associated with delivering a specific program **plus**
- **Allocated or Indirect Costs:** Fair shares of management & other shared costs

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How do **YOU** determine what your services **COST**?

- Direct program costs only?
- What a given funder will pay?
- What others charge for similar service?
- ????

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Start with Functional Budget

- Distinguish **purpose/function** of all costs as well as line items
- May also include income associated with specific functions

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Function Cost Center Format

	Total	Management	Fund raising	Senior Services	Homeless Services	Energy Assistance
Personnel						
Prof. Services						
Occupancy						
XXXXX						
Total						
Expenses						

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Which is different from a

Funding Agreement Cost Center Format

	Total	Management	Fund raising	Award 1	Award 2	Contract 3
Personnel						
Prof. Services						
Occupancy						
XXXXX						
Total						
Expenses						

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Functions & Funding Agreements

- Function = **purpose**
- Funding Agreement = **source** that will pay for costs associated with a function
- Budget **structure** – functional vs funding source
- **Functional** structure facilitates determining service costs

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Exhibit 11

Organization A - Program A by funding source with multiple caps and limitations

	PROGRAM A			
	Gov't grant	Private grant	General ops.	Total
Expenses:				
Salaries & wages	\$ 5,000	0	13,613	18,613
Employee benefits	0	0	2,792	2,792
Materials & supplies	2,600	0	2,600	5,200
Postage & shipping	0	605	0	605
Printing & publications	0	1,000	0	1,000
Telephone	115	0	641	756
Occupancy	400	0	1,819	2,219
Depreciation	0	0	684	684
Total direct expenses	8,115	1,605	22,149	31,869
Allocation of shared costs	243	106	1,763	2,112
	\$ 8,358	1,711	23,912	33,981

1. Government grant caps salaries at \$5,000, benefits and depreciation at 6%, and shared costs at 3%.

2. Private grants pays only postage and shipping, and printing and publications, but accepts the 6.6% shared cost rate.

Award Worksheet

Line item	Total Award/Contract	Prior FY portion	Current FY portion	Next FY portion
Personnel				
Fringe Benefits				
Travel				
Equipment				
Supplies				
Contractual				
Other				

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Methods to Determine Full Cost

- **Cost allocation plan**
 - Item by item
 - Shared cost centers
- **Use of an Indirect Cost rate**
 - 10% de minimis
 - NICR
 - Other

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Functional Budget

Organization A

	TOTAL EXPENSES				
	Programs			Admin	Shared
	A	B	C		
Expenses:					
Salaries & wages	\$ 18,613	19,500	23,347	18,557	5,150
Employee benefits	2,792	2,925	3,502	2,784	772
Materials & supplies	5,200	8,900	3,581	1,124	0
Postage & shipping	605	987	4,251	895	2,088
Printing & publications	1,000	1,355	756	201	50
Telephone	756	1,222	1,336	2,285	2,263
Occupancy	2,219	4,590	9,675	11,116	0
Depreciation	684	758	95	151	0
Total direct expenses	31,869	40,237	46,543	37,113	10,323
Allocation of shared costs	2,112	2,667	3,084	2,460	(10,323)
	\$ 33,981	42,904	49,627	39,573	0

1. The effective shared cost rate = 6.6% $[\$10,323/(\$166,085 - \$10,323)]$
 2. Shared costs are allocated by applying shared cost rate (6.6%) to each cost center's total direct expenses
 (e.g., Program A: 6.6% X \$31,869 = \$2,112)

Shared Costs Allocated Item by Item

Organization C - Shared cost rate of 0%

	TOTAL EXPENSES				
	Programs			Admin	Shared
	A	B	C		
Expenses:					
Salaries & wages	\$ 19,255	21,621	25,388	18,903	--
Employee benefits	2,881	3,050	3,727	3,117	--
Materials & supplies	5,200	8,900	3,581	1,124	--
Postage & shipping	923	1,612	4,541	1,750	--
Printing & publications	1,025	1,380	800	157	--
Telephone	1,290	1,417	2,244	2,911	--
Occupancy	3,219	4,590	8,675	11,116	--
Depreciation	188	334	671	495	--
Total direct expenses	33,981	42,904	49,627	39,573	--
Allocation of shared costs	--	--	--	--	--
	\$ 33,981	42,904	49,627	39,573	--

1. The shared cost rate = 0%. No shared cost allocation mechanism is used; all expenses are charged directly.
 2. The administrative rate = 23.8% $[\$29,573/(\$166,085 - \$29,573)]$

Item-by-Item Allocation of Shared & Admin Costs

	Prog 3	Prog 2	Prog 1	Shared	Total
Total Direct Costs	2 Million	1 Million	100,000		3.1 Million
Rent				60,000	60,000
Audit				20,000	20,000
Accounting Staff				60,000	60,000
Utilities				10,000	10,000
TOTAL	2 Million	1 Million	500,000	150,000	3,250,000

	Prog 3	Prog 2	Prog 1	Shared	Total
Total Direct Costs	2 Million	1 Million	100,000		3.1 Million
Rent	39,000	19,200	1,800	0	60,000
Audit	13,000	6,400	600	0	20,000
Accounting Staff	39,000	19,200	1,800	0	60,000
Utilities	6,500	3,200	300	0	10,000
TOTAL	2,097,500	1,048,000	10,500	0	3,250,000

Cost Allocation Methods

- % of FTE
- % of personnel costs
- % of total dollars (management)
- % of square feet (facilities)
- % of units of service

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Indirect Cost Rates

- Multiple methods
- Compute **Indirect Costs** as a % of **Direct Cost Base**
- Apply the **Indirect Cost %** to the Direct Cost Base to **determine amount allocated** to Direct Cost Center

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Indirect Cost Rate Based on a Fraction

Numerator = Indirect Costs

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Denominator = Direct Costs

Must make choices about both

$$\frac{800,000}{2,200,000} = .36$$

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Indirect Cost Definition Choices

- **Must** include **administrative costs** which benefit entire entity
- **May** include other **common** or **shared costs** which benefit entire entity:
 - Facilities
 - Telephone/internet
 - Copiers, etc.

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Organization A - "Fully loaded" cost model

	TOTAL EXPENSES					
	Direct Programs			Admin	Shared	Total
	A	B	C			
Expenses:						
Salaries & wages	\$ 18,613	19,500	23,347	18,557	5,150	85,167
Employee benefits	2,792	2,925	3,502	2,784	772	12,775
Materials & supplies	5,200	8,900	3,581	1,124	0	18,805
Postage & shipping	605	987	4,251	895	2,088	8,826
Printing & publications	1,000	1,355	756	201	50	3,362
Telephone	756	1,222	1,336	2,285	2,263	7,862
Occupancy	2,219	4,590	9,675	11,116	0	27,600
Depreciation	684	758	95	151	0	1,688
Total direct expenses	31,869	40,237	46,543	37,113	10,323	166,085
Allocation of shared costs	2,112	2,667	3,084	2,460	(10,323)	0
Total direct & shared costs	33,981	42,904	49,627	39,573	0	166,085
Allocation of admin costs	10,629	13,420	15,524	(39,573)	0	0
	\$ 44,610	56,324	65,151	0	0	166,085

1. The effective shared cost rate = 6.4% [(\$10,323)/(\$166,085 - \$10,323)]
 2. The administrative rate = 23.8% [(\$39,573)/(\$166,085)]
 3. Shared costs are allocated by applying rate (6.4%) to each cost center's total direct expenses
 [e.g., Program A: 6.4% X \$31,869 = \$2,112]
 4. Administrative costs are allocated based on pro rata distribution of total direct & shared costs of each program
 [e.g., Program A: \$33,981 X (\$39,573)/(\$166,085 - \$39,573)] = \$10,629]

Direct Cost Base

Options for Federal Indirect Cost Rates

- a) **Total Direct Salaries & Wages**
(including compensated absences)
- b) **Total Direct Personnel Costs**
(including employer PR tax & fringe benefits)
- c) **Modified Total Direct Cost: MTDC**

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Total Direct *Salaries* as Direct Cost Base

TOTAL Expenses	Total Costs	Unallow Indirect Costs	Allowable Indirect Costs	Total Direct Costs	Award 1 Direct	Award 2 Direct	Award 3 Direct	Non-Fed Direct Cost
Salaries Only	2,640,000		440,000	2,200,000	588,000	1,100,000	380,000	132,000
Other Expenses	1,810,000	10,000	360,000	1,440,000	412,000	640,000	320,000	68,000
Total	4,450,000	10,000	800,000	3,640,000	1,000,000	1,740,000	700,000	200,000

Allowable Indirect	800,000
Direct Salaries	2,200,000
Indirect Rate	0.36

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Total Direct *Personnel* Costs as Direct Cost Base

TOTAL Expenses	Total Costs	Unallow Indirect Costs	Allowable Indirect Costs	Direct Costs	Award 1 Direct	Award 2 Direct	Award 3 Direct	Non-Fed Direct Cost
Salaries & Fringe Benefits	3,600,000		600,000	3,000,000	800,000	1,500,000	520,000	180,000
Other Expenses	850,000	10,000	200,000	640,000	200,000	240,000	180,000	20,000
Total	4,450,000	10,000	800,000	3,640,000	1,000,000	1,740,000	700,000	200,000

Allowable Indirect	800,000
Total Direct Salaries & Fringe Benefits	3,000,000
Indirect Rate	0.27

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Modified Total Direct Cost Base

TOTAL Expenses	Unallow Indirect Costs	Excluded Direct Costs	Allowable Indirect Costs	MTDC	Award 1 Direct	Award 2 Direct	Award 3 Direct	Non-Fed Direct Costs
4,450,000	10,000	40,000	800,000	3,600,000	1,000,000	1,740,000	660,000	200,000

Allowable Indirect	800,000
MTDC	3,600,000
Indirect Rate	0.22

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**Uniform Guidance permits
10% MTDC de minimis rate
not 10% of total costs**

Total Expenses	Unallowable Indirect Costs	Excluded Direct Costs	Allowable Indirect Costs (10% of MTDC)	MTDC	Prog 1 Direct	Prog 2 Direct	Prog 3 Direct	Non-Federal Direct Costs
4,450,000	10,000	40,000	400,000	4 Million	1 Million	2.1 Million	700,000	200,000

Allowable Indirect	400,000
MTDC	4,000,000
Indirect Rate	0.10

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MTDC Direct Cost Base excludes:

- Equipment & capital expenditures
- Rental costs
- Participant support costs
- Charges for patient care
- Tuition remission
- Portion of each sub-award in excess of \$25,000
- Other costs that would distort distribution of indirect costs

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Applying an Indirect Cost Rate

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Applying MTDC Based Indirect Cost Rate (ICR)

Total Expenses	Unallow Indirect Costs	Excluded Direct Costs	Indirect Costs	MTDC	Prog 1 Direct	Prog 2 Direct	Prog 3 Direct	Non-Federal Direct Cost
4,450,000	10,000	40,000	400,000	4,000,000	1,000,000	2,100,000	700,000	200,000
Indirect Rate .10				400,000	100,000	210,000	70,000	20,000
Excluded Costs							40,000	
Unallow Indirect								10,000
Total Costs					1,100,000	2,310,000	810,000	230,000

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Applying Total Direct Salaries Based ICR

	Total	Unallow Indirect	Allowable Indirect	Total Direct Costs	Award 1	Award 2	Award 3	Non-Fed
Salaries Only			440,000	2,200,000	588,000	1,100,000	380,000	132,000
Other Allowable Indirect Costs			360,000					
Indirect Rate 36%			(800,000)	800,000	213,500	400,000	130,000	47,500
Allowable direct +indirect		10,000		1,440,000	412,000	640,000	320,000	68,000
Unallow Indirect Alloc		(10,000)		10,000				10,000
Total Costs		0	0	4,450,000	1,213,500	2,140,000	839,000	257,500

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Applying Total Direct Personnel Costs based ICR

	Unallow Indirect	Allowable Indirect	Total Direct Costs	Award 1	Award 2	Award 3	Non-Fed
Total Direct Salaries		600,000	3,000,000	800,000	1,500,000	520,000	180,000
Other Allowable Indirect Cost		200,000					
Indirect Rate 27%		(800,000)	800,000	213,333	400,000	138,667	48,000
Allowable direct +indirect	10,000		640,000	200,000	240,000	180,000	20,000
Unallow Indirect Alloc	(10,000)		10,000				10,000
Total Costs	0	0	4,450,000	1,213,333	2,140,000	838,667	258,000

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Audiences for Cost Info

- Internally
- Donors
- Foundations
- Governments

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Internal Users

- Identify functional cost centers
- Identify income sources that support each cost center
- Distinguish direct & allocated costs
- Determine best use for unrestricted funds

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Sample Functional Budget

EXPENSES	TOTAL	ADMIN	F.R.	PROG A	PROG B	PROG C	PROG C GRANT 1
Salaries	540,700	110,420	15,420	150,500	110,700	20,500	117,760
Personal Rates (20%)	87,700	22,500	2,500	15,500	11,700	2,500	12,000
Fringe Benefits (20%)	88,500	17,500	1,500	15,000	10,000	2,500	11,500
Software Personnel	710,000	155,500	10,000	100,000	100,000	10,000	10,000
Professional Services	22,000	5,000	10,000	1,000	500	500	2,000
Occupancy	40,000	8,500	1,700	8,110	7,000	4,420	4,420
Utilities	15,000	3,000	5,000	5,000	1,000	1,000	1,000
Transportation	10,000	500	800	0	2,000	1,500	1,000
Other Expenses	20,000	4,000	2,000	2,000	4,000	2,000	2,000
TOTAL EXPENSES	1,070,000	275,000	35,000	380,000	330,000	30,000	180,000
Allocation of Admin	0	479,700	11,420	47,000	41,510	11,000	44,000
EXPENSES ALLOCATED ADMIN	890,000	0	86,500	330,000	307,490	30,000	136,000
SUPPORT AND REVENUE	100,000	0	0	0	0	0	0
Administrative Grants/Reimburse	100,000	0	0	40,000	10,000	0	20,000
Reimbursement	100,000	0	0	70,000	10,000	10,000	10,000
Individuality Reimburse	100,000	0	0	10,000	1,000	1,000	1,000
General Grants	60,000	0	0	0	0	0	0
Program Service Fees	200,000	0	0	100,000	10,000	10,000	10,000
Unrestricted Income	100,000	0	0	0	0	0	0
SUBTOTAL SUPPORT & REVENUE	600,000	200,000	20,000	170,000	31,000	21,000	41,000
REVENUE - EXPENSES	30,000	195,000	5,000	20,000	20,000	20,000	20,000
Unrestricted Reimbursement	0	195,000	5,000	20,000	20,000	20,000	20,000
NET INCOME	30,000	195,000	5,000	20,000	20,000	20,000	20,000

Budget Development Template

- <http://www.wallacefoundation.org/knowledge-center/resources-for-financial-management/Pages/Program-Based-Budget-Template.aspx>



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Funders: Communicating Costs in Proposals

- Start with organization-wide functional budget
- Identify the program/service the funder seeks to support
- Identify specific funder requirements & limitations
- Determine which of the full costs of the service the funder is willing to pay

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Info needed from funder...

- Unallowable costs?
- Limitations on certain costs?
- Matching funds requirement?
- Cost reimbursement or fixed price?
- Payment per line item budget or unit price?

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Key Question; Basis for Funder Payment

- Approved line item budget
- Negotiated hourly rate for key position – i.e. case manager
- Negotiated payment per unit of service – i.e. per meal
- Pay for performance – pay per outcome achieved

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Provider must consider...

- Volume of service to be provided
- Number & type of staff required
- Facility & other operating costs
- Data collection & reporting requirements
- Start-up and turn-over costs

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Basic Budget Info for Proposals:

- Full cost of delivering the service (direct and allocated)
- Portion of cost to be met with funder \$\$ and portion to be met with “match”
- Source for the match
- Source to cover “unallowable” costs

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Program Budget with Match

	Total Prog A	Cnty Award	Match	Other Costs
Direct Exp				
Personnel	124,306	124,306	0	0
Contractual	20,000	10000	10000	0
Other	11,000	5000	3000	3000
Sub-total Direct	155,306	139,306	13,000	3,000
Allocated Costs				
Facilities	10,000	4000	6000	0
Administration	14,500	14000	0	500
Total Costs	179,806	157,306	19,000	3,500

Personnel Costs - Prog A						
July 1,2017 - June 30,2018						
		% FTE Full	# hrs per	Monthly pay	# of months	Annual
Position	Hourly Rate	Time	month			Total
Program Manager	\$25.00	1.00	173.30	\$4,333	12	\$51,996
Program Specialist	\$20.25	1.00	173.30	3,509	12	42,112
Program Assistant	\$15.00	0.40	69.32	1,040	6	6,239
Sub-total Salaries						\$100,347
Employer Taxes	Tax %					
FICA	0.0765					\$7,675
Unemployment	0.025					2,509
Workers Comp	0.001					100
Sub-total Employer Taxes	0.1025					\$10,285
Fringe Benefits	cost per employee per month	# of covered employees		Monthly Cost		Annual Total
Health Insurance	600	2		1200		\$12,000
Dental Insurance	60	2		120		1,200
Disability Insurance	20	2		40		480
Sub-total Fringe Benefits	670	2				\$13,680
Total Personnel Costs						\$124,306

Pitfalls in Program Budgets

- Impact of **paid time off** on volume of service or need for subs
- Time required for **training, supervision, Quality Assurance**
- **Cost** of recruiting & managing **volunteers** & obtaining **in-kind** gifts
- **Record keeping** system demands
- **Impact** of agency **growth** or **contraction** on allocated costs

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Unit Cost Example:**Cost of 1 Hour of Service by Case Manager**

- Must recover the **full cost** of the **service** through billing for hours of service provided by Case Manager
- Includes **direct cost** of Case Manager + **fair share** of other direct costs & agency-wide allocated costs

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Cost per Hour of Case Management

- Salary, taxes, benefits of case manager
- Allocated share of other direct costs for the program – supplies, etc.
- Allocated share of agency-wide costs – management, facilities, IT
- Divide total cost by number of hours of case management to be provided

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Fully Loaded Cost Per Hour of Direct Case Management Service

	Total Prog B
Direct Exp	
Personnel	300,000
Contractual	50,000
Other	12,000
Sub-total Direct	362,000
Allocated Costs	
Facilities	20,000
Administration	40,000
Total Costs	422,000

Cost per hour of CM	
Est Hrs. of CM per week per FTE	25
Est weeks worked per year	48
Est hrs. of CM per year per FTE	1,200
Est annual hrs. of CM for 3 FTE CMs	3,600
Full cost of Prog B	422,000
Cost per hour of CM	117.22

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Hourly Rate-based Agreement Pitfalls

- Fail to provide the anticipated number of hours of CM
- Provide more than the contracted number of hours but payment is capped
- Underestimate the time required for supervision, training, & quality assurance

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One more example: Congregate Meals Unit Cost

- Is the cost of serving 500 meals half of the cost of serving 1000?



- Why or why not?

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Congregate Meals Unit Cost

- Develop **program budget** based on anticipated volume of service –include **direct** and **allocated costs**
- Consider “**utilization rate**” – what % of your capacity for serving meals will actually be used
- Use the anticipated utilization number to calculate **unit cost**

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Cost Per Meal

	Total Prog C		
Direct Exp		Cost per Meal	
Personnel	80,000	Capacity for meals per day	60
Food	50,000	Est days of operation per year	240
Other	12,000	Capacity for meals per year	14,400
Sub-total Direct	142,000	Est utilization %	0.90
Allocated Costs		Est meals actually served per year	12,960
Facilities	20,000	Full cost of Prog C	163,600
Administration	1,600	Cost per meal	12.62
Total Costs	163,600		

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2 Key Variables

- # of meals served
- Relationship between fixed and variable costs in the program budget

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Preparing Your Cost Proposal

1. Develop agency-wide functional budget
2. Identify direct costs required to provide the service your are proposing
3. Allocate management & shared costs to all cost centers
4. Determine the full cost the service

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Preparing the Cost Proposal...

continued

- Be sure you have included all costs needed to meet funder's service requirements
- Understand the payment mechanism
 - Unit of service
 - Program budget line-items

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Preparing the Cost Proposal...

continued

- Determine match requirements
- Identify match source
- Identify costs involved in obtaining the match
 - Recruiting/managing volunteers
 - Obtaining/tracking in-kind goods and services

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Preparing the Cost Proposal...

continued

- Identify necessary but unallowable costs
- Identify source to pay for them
- Determine whether you can provide the service within the funder's specified unit cost range

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Next Steps

- Review RFPQ materials
- Identify the services your org is interested in providing
- Determine the full cost of services
- Identify match sources
- Review! Review! Review!

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Valentine Treat!

- Session 3
- Responding to RFPQ for Aging, Disability, & Veterans Services Division
- February 14th



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