

# A Guide to Cost Analysis

## Allocation of Costs

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Allocating expenses, including salaries, wages and fringe benefits, is the most important element in determining the cost of providing services. This allocation must be done appropriately and consistently to capture the real costs that occur in each cost center identified by the agency. The allocation of staff and other expenditures may be done in a variety of ways. However, unless the methodology accurately represents expenditures in each cost center, the agency will not be able to recover all of the costs of doing business. The important point to stress here is the accuracy of the financial information and allocation process. The more accurate the data, the more useful will be your analysis. In some instances estimates may be all that are available. However, the more precise you are, the better the outcome.

### Allocation of Staff

The first task is to allocate staff into the identified functional cost centers. To do this you must allocate *each and every person* who has worked during the reporting period into one or more functional cost center(s). It is important to allocate an individual into as many functional cost centers as are appropriate. To how many cost centers should an individual be assigned? A general rule of thumb suggests that if a staff person spends less than 10% time in a cost center (i.e., less than ½ day per week for full time staff) the allocation is not meaningful. However, if someone works at the same task for two (2) hours everyday, you may want to allocate that time into a cost center. It is important also not to allocate staff based on job title but precisely *on the functions* they provide. That is, a Nurse Practitioner may not be providing Nurse Practitioner functions at all times. She may variously provide support for the laboratory, for the pharmacy, for counseling and as an administrator. Therefore, she should be allocated into those cost centers rather than have 100% of her time allocated into the direct medical cost center for mid-level practitioners. Individuals who are paid by contract or are per diem also need to have their time allocated. It is not the method of payment for services that becomes important but the time staff spends in particular cost centers performing related duties.

### Time Study

The best way to accomplish this allocation is through a time study. Ideally, the time study should be done during two different points of time during the year. These should represent “typical” time periods (not summer when many people are on vacation or some other abnormal set of circumstances). You should be able to determine how your staff spends work time in relationship to the functional cost centers. The time study is the most accurate methodology you have to find out what is occurring in your agency. One example is attached as a spreadsheet in the Excel workbook (see below).

TIME STUDY														
1														
2	Allocate Time in 15 minute blocks.													
3	Use TOTAL minutes worked in each area.													
4	Time is converted to hours (or fractions of hours) for percent calculations													
5														
6	Staff Name:											Job Title:		
7														
		Physician	Mid-level Pract.	RN Medical	Medical Support	Follow Up	Counseling	Lab	Pharmacy	Community Ed./Out	Administration	Facility	Other	TOTAL
8	Time Frame													
9	Monday AM													0
10	Monday PM													0
11	Monday Eve													0
12	Tuesday AM													0
13	Tuesday PM													0
14	Tuesday Eve													0
15	Wednesday AM													0
16	Wednesday PM													0
17	Wednesday Eve													0
18	Thursday AM													0
19	Thursday PM													0
20	Thursday Eve													0
21	Friday AM													0
22	Friday PM													0
23	Friday Eve													0
24	Saturday AM													0
25	Saturday PM													0
26														0
27	Sunday													0
28														0
29	TOTAL TIME	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Percent	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
31														

Ready

Part of the time study can be implemented through a clinic analysis. The Patient Flow Analysis (PFA) available through CDC, or some other system such as *Task Track*, can help you define, minute by minute, how staff spends their time in the clinic setting. The PFA or Task Track will give you the precision you need to document the amount of time spent in each unit of service for the medical/clinical cost center. It is important, however, to also know how staff spends time outside of the clinic. This should be accomplished by an additional time study. The time study gives you the precision to determine how staff spends their time in each unit of service, such as follow up, outreach, community education, etc., outside the clinic setting. Together the multiple time studies can provide a comprehensive view of staff activity and will facilitate the allocation process.

The second way of determining how to allocate staff into the functional centers is through the use of supervisory staff. Using this method, the supervisor, or a supervisory team, determines where and how staff is spending their time and how much should be allocated to each cost center. This can be useful in allocating a large number of personnel into appropriate cost centers.

Less precise, but also a system used by many agencies, is to have the Executive Director or the Finance Officer allocate staff time into cost centers based on their knowledge of the agency. Unfortunately, this usually reveals what the administrators think the staff ought to do rather than providing an accurate accounting of what staff actually does. To compliment this process, one can use weekly or monthly schedules but an adequate level of precision is not often attainable using this methodology.

#### Allocating Volunteers and Donated Staff

It is also important to allocate those individuals that volunteer in your program or are donated by some other agency or some other department for use in your program. Remember, if these individuals were not available you would, a) have to pay for those services on the open market or, b) have to do without their services. Therefore, donated individuals must be included to obtain a true picture of the cost for doing business. Volunteers or donated personnel should, however, be calculated on a separate spreadsheet (and reported on column 3 “Donated Services” if you are using the Cost Center Report).

#### Percent of Effort

To allocate staff into cost centers, we spread their *effort* into the particular cost center(s) in which they work. Identifying the percent of time the staff works *in each cost center* so the time that is allocated equals 100% does this. Each individual, regardless of how much that individual works during the week or during the year *must* have 100% of his or her time allocated into cost centers.

#### Allocation of Other Expense

Of equal importance is the allocation of other than personnel expenditures incurred by the program. Some of these expenses may be allocated 100% into a single cost center while others will be spread over two or more cost centers depending on their use and function. For instance, certain items, such as those connected to running the facility, will be allocated 100% into the facility cost center even though the facility may be a large medical building where a small clinic is held. Other items, such as the purchase of office supplies or telephone costs, may be allocated to different cost centers depending on their use.

The methodology for allocating these expenditures will vary from program to program. One way to allocate expenses is to track the usage through inventory control to insure that the allocation into the cost center is consistent with the use. Another technique is to use the percent of personnel that works in each cost center. This is brought forward from the “alloc-staff” spreadsheet to the bottom of the “alloc-other” sheet.

	A	B	C	D	E	F	G	H	I	J	K
1	SHELL		Allocates the Other Costs expended into each cost center.								
2	Other Than Personnel Costs		There is space for thirty (30) items. (See Manual for examples.)								
3	<i>Agency Name:</i>	0.00									
4			(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
5	Cost	Amount to Distribute	Med Sup	Follow Up	Counseling	Lab	Pharm.	Community Ed./Out	Admin.	Facility	Check Total
6	Item										\$0
7	Item										\$0
36	<b>TOTAL</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	<i>Formula to allocate cost by personnel</i>		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
38	Percent for Personnel		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
39											
40	<i>OTPS costs</i>										
41	Medical	\$0									
42	Laboratory	\$0									
43	Pharmacy	\$0									
44	Community Service	\$0									
45	Administration	\$0									
46	Facility	\$0									
47	<b>TOTAL</b>	\$0									
48											

A third technique may be to allocate the expenditure based on the square footage utilized by each functional area. This technique, however, may give a skewed picture if the square footage is not consistent with the nature of your agencies operation. Whatever method is used to allocate these expenditures, the allocation method should be consistent and every attempt should be made to insure that all expenditures are allocated into the proper cost center.

Examples of expenses and cost centers where they might be allocated are attached below.

#### Allocation of Donated Goods and Services

It is important to allocate all donated goods and services. These are displayed on Column 3 of the Cost Report. This includes personnel that are donated or volunteers that provide services to the agency. In addition, anything else that has been donated, such as equipment (or the depreciation on donated equipment), supplies, laboratory services, medical or clinical goods, or office space, should be allocated into the appropriate cost centers. Remember, without these donations, you would have to pay for these goods and services on the open market. Therefore, the allocation of the fair market cost is important to provide an accurate picture of your cost of doing business. If these goods and services are a luxury, that is, you if could do business without them, do not accept them. The bottom line; this is a part of the cost of doing business and either you have to recapture these costs or you have to eliminate them.

## Allocation of Expenditures (Examples)

The following are examples/suggestions of how some common expenses could be allocated on the “alloc-other” spreadsheet. These are only examples. Each program should make its own best estimate of where expenses should be allocated.

Expense	Allocation
Accounting fees	Administration
Advertising	Specify 1 or 2 centers (not facilities, lab, or pharmacy)
Alarm System	Facility
Appointment System	Medical support unless the activity directly applies to lab.
Audit	Administration
Automated Data System	Portions allocable to Administration, Medical, Lab and Pharmacy, as appropriate.
Computer Support	Administration unless you can pinpoint the expense.
Contraceptives - injectables	Pharmacy
Contraceptives - Oral	Pharmacy
Contraceptives other	Pharmacy
Contract Services	To cost center(s) that benefit
Conventions/conferences	Should follow the people and the reason for the meeting. If not - Admin
Data Processing fees	Administration
Depreciation - Medical equipment	Allocate to medical support and laboratory.
Depreciation - Other	Allocate to appropriate cost center(s) or spread to all cost centers.
Dues and Membership	Try to be specific based on type (not facilities, lab, or pharmacy). If not -admin.
Duplicating	Various depending what it is for (probably not facilities)
Electronic billing	Admin
Employee bond ins	Admin
Equipment Rental	Directly assignable to cost centers in accordance with equipment usage (separate medical equipment from "other" equipment, if possible).
Exterminating	Facility
Interest on Loans	Directly assignable to cost centers that benefit from the loan.
Janitorial Contract	Facility
Lab - HIV	Laboratory
Lab - Outside Reference Lab	Laboratory
Lab - pap Smears (including Thin Prep)	Laboratory
Lab supplies for In house labs	Laboratory
Legal Fees	Administration
Licenses & permits	Should be tied to the actual cost center for the license or permit.
Maintenance and Repair	Facility
Malpractice insurance	Med support
Medical/clinic supplies	Med support, lab, and pharmacy

Mortgage Payments	Facility
Office supplies	Spread to all cost centers
Orasure (HIV Rapid test)	Laboratory
Pamphlets	Only med support, counseling, or community ed.
Patient Record supplies	Medical Support
Postage	OK to spread (tough to put in facilities)
Prescription medications	Pharmacy
Printing	Various - depending what it is for(not facilities)
Professional fees	Allocate to the cost center(s) the professionals support
Property ins	Facility
Pt education supplies	Medical support and/or counseling
Rent	Facility -allocated later
Staff educ/training	Should follow the people and the reason for the meeting. If not - Administration.
Staff Recruitment	Administration.
Telephone	Put in appropriate cost centers, if known or spread to all centers
Travel	Place in cost centers where travel occurred or in Administration.
Utilities	Facility
Vehicle Fuel/Maintenance	Administration unless you can identify the exact usage.
Waste Management	Directly assignable to Medical support or lab. Can go to Facility.