

Budget Tool Helps Investigative Sites Calculate the Cost of a Coordinator's Time for a Typical Outpatient Study Visit Part I



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Note: This is Part I of a two-part series describing the Coordinator Cost Calculator (“CCC”), a spreadsheet-based tool designed to help investigative sites calculate the cost of a study coordinator’s time for an uncomplicated phase-III clinic study visit.

In Part I of the series, we look at the total cost of the research coordinator by calculating both the salary and benefit components of a hypothetical coordinator’s compensation package, and then we estimate the total number of workdays available to this hypothetical coordinator by subtracting days the coordinator is absent from the workplace due to leave, holidays, training and various business duties. What we are left with in Part I of this series is an estimate of the total compensation cost of the coordinator and the actual number of days the coordinator is in the research clinic and available to conduct his or her normal research work.

The first step in calculating the cost of a hypothetical study coordinator’s time is to state an average yearly salary for a coordinator. That is easier said than done! The Associates of Clinical Research Professionals (ACRP) published the last comprehensive data that we have on coordinator salaries in the winter of 1998.¹ That survey, which is now five years old, found that the 50th percentile for coordinator salaries was \$38,000. If we would adjust that figure by a relatively modest (by health care standards) 3.5% inflation rate for five years, we would project that the average coordinator salary is now about \$45,000, and that is the figure we used to start our analysis in Table 1.

Health Insurance and Social Security

On the benefits side of coordinator compensation, there are two major items that – when combined - equal a full 50% of the total benefits of our hypothetical coordinator. These two costly benefits rarely bring a smile to the employee’s face, as one

Table 1
The Coordinator Cost Calculator - Version 2.2

Coordinator’s Total Salary and Benefits:

Coordinator’s Yearly Salary/Pay Rate **\$45,000**

Employee Benefits:

Overtime (if not salaried, estimated at 40 hours/yr)	\$ 1,298
Employer’s Health Insurance Contribution/year	3,600
Employer’s Pension/401k Contribution (3%)	1,389
Bonus or Incentive Pay	0
Dues and Subscriptions/year	250
Miscellaneous: parking, snacks/food, auto allowance	250
Travel and Fees for Yearly Convention	2,000
Education and Training Fees	500
Social Security Employer Match	3,542
FUTA, State Unemployment Taxes	463

Subtotal of Employee Benefits \$13,292 (29.5%)

Total Salary and Benefits **\$58,292**

is mandated by law (the employer match for social security), and the other is ingrained in our work culture as an employee entitlement (employer-provided health care insurance).

The total social security match paid by employers is 7.65% of compensation, and each employee makes the same 7.65% mandatory contribution (deducted from his/her gross pay).²

As for health insurance, it is well documented that health insurance gathered steam as an employee benefit after World War II, and has been an expectation of employees ever since. The Wall Street Journal has quoted a survey of today's workplace by Mercer Human Resource Consulting, which fixes the cost of the average worker's health benefits at \$5,646 per year in 2002.³ In our example in Table 1, we have chosen a lesser figure (\$3,600 per year) using the debatable rationale that many research organizations are small businesses and might not have a benefits package as generous as the large companies surveyed

by Mercer. (Current estimates of health care insurance costs can be obtained over the web at sites such as eHealthInsurance.com, among others).

Overtime, 401(k) Plans, Conventions

In the cost calculator, we have assumed that this coordinator is an hourly employee who is eligible for overtime. Of course, the determination of whether an employee is hourly and eligible for overtime, or salaried and not eligible for overtime, is a matter of law. The U.S. Department of Labor administers the Fair Labor Standards Act ("FLSA"), which governs the payment of overtime.⁴ In the model, we have assumed that the coordinator worked one week (40 hours) in overtime during the year.

While the hypothetical coordinator received overtime pay, we have assumed that no bonus or incentive pay was made during the year. However, the coordinator participated in the employer's 401(k) plan and received a 3% matching contribution from the employer.

Attendance at a clinical research convention is the last high ticket item in the analysis. The coordinator's employer pays for the coordinator to attend one out-of-town convention (SoCRA, DIA, ACRP) per year (\$2,000 for travel and fees). In much the same category, the employer also pays \$500 for a training course for the employee (perhaps a computer skills course given locally).

Totals and Comparisons

Looking at the total of benefits in Table 1, we conclude that \$13,292 or 29.5% of the base pay is being spent for employee benefits. Of course, the individual line items may vary greatly from one investigative center to another. Therefore, we have added Table 2 to this text, with columns for "Low," "Medium" and "High" benefit & compensation rate examples.

In Table 2, we start with the study coordinator's pay rate, and in the "Low" column we apply absolutely no benefits except those required by law. In contrast, the "High" column's benefits are usually double the amount in the "Medium" column.

Table 2
A Comparison of Low, Medium and High Compensation Rates

Coordinator's Total Salary and Benefits:

	Low	Medium	High
Coordinator's Pay Rate	\$38,000	\$45,000	\$52,000
Employee Benefits:			
Overtime (for 0, 40, & 80 hours)	0	1,298	3,000
Health Insurance ("high" is based on Mercer survey)	0	3,600	5,646
Employer's Pension/401k Contribution (0, 3, & 6 %)	0	1,389	3,300
Bonus or Incentive Pay (0, 0, & 5%)	0	0	2,600
Dues and Subscriptions per year	0	250	500
Miscellaneous	0	250	500
Travel and Fees for Convention(s)	0	2,000	4,000
Education and Training Fees	0	500	1,000
Social Security Employer Match (7.65%)	2,907	3,542	4,208
FUTA, State Unemployment Taxes (1%)	<u>380</u>	<u>463</u>	<u>550</u>
Subtotal of Employee Benefits	<u>\$ 3,287</u>	<u>\$13,292</u>	<u>\$25,304</u>
Total Salary and Benefits	<u>\$41,287</u>	<u>\$58,292</u>	<u>\$77,304</u>
% of Benefits to Employee Pay	8.7%	29.5%	48.7%

The actual amount of benefits under these three scenarios, expressed as a percentage of the employee's pay, are 8.7% for the low option, 29.5% for the medium option, and an almost amazing 48.7% for the high option.

Work Year

The next step in the process to determine a study coordinator's cost-per-study visit is to analyze the number of days the coordinator is actually present in the workplace, factoring in the normal absences occasioned by holidays, leave days, training days, and the like.

The calculation of total workplace days is much more straightforward than the salary and benefits computation. There are differences, for example, in the number of approved holidays (is the day after Thanksgiving a holiday at your workplace?) and the amount of employee vacation time (does a new hire receive two weeks vacation; does a 10-year employee receive three weeks vacation?). However, these differences in the days actually worked are not as severe as for other workplace variables.

Of course, the starting point for this calculation is 52 weeks times five days per week, or 260 workplace days per year. For employee leave days, we have used 10 as the number of employee vacation days and five days for sick leave per year. Next, we subtract nine holidays per year and 10 days spent attending industry seminars and other training & education courses. Finally, we estimate that the study coordinator will attend two to three investigator meetings, and have subtracted six working days for this task. The result is that an estimated 40 workdays per year are spent away from the office. That's almost two months a year that an employer will have to pay full salary and benefits for an "absent employee."

Fully-Loaded Employee Cost

To recap, we have taken a study coordinator who is being paid an industry-average salary of \$45,000, and calculated that his/her full salary and benefit cost is over \$58,000. Then we have estimated that the coordinator will be at his/her work desk for only 220 out the possible 260 workdays per year.

What is the significance of these two calculations? Taken together, they can give us an employee's total cost per working hour, a figure that sometimes is referred to as an employee's fully-loaded cost. For our example, the employee's full salary and benefits cost of \$58,292 is divided by 1,760 working hours (220 days times eight hours per day), for an hourly rate of \$33.12.

A coordinator being paid \$45,000 per year is considered simplistically by most people to be making \$21.63 per hour (calculated by dividing the pay amount by 2,080 hours, the product of 52 weeks times 40 work hours per week). However, a cost accountant will use the calculations described in this article to justify the \$33.12 rate per hour, a figure a full 50% higher than the nominal pay rate.

In Part II (next issue) of this series, we will explore how to adapt the fully-loaded cost of the study coordinator to the specific operating practices of a typical clinical research site. If you thought the 50% rise in the coordinator's nominal hourly rate to the full-loaded hourly rate was surprising, then you will be further surprised by the model's calculation of the coordinator's proposed billing rate to conduct clinical trials.

Endnotes

- ¹ Robert C. Shaw, Laurie Halloran, "ACRP's North American Salary Analysis," *The Monitor*, Winter 1998.
- ² The total social security tax of 15.30% is split equally between the employee and employer. For each (both the employer and employee), the tax is composed of the Social Security (OASDI) portion of 6.20% on earnings up to \$87,000 (in 2003), and the Medicare (HI) portion of 1.45% on all earnings. See: <http://ssa.gov/employer/factsheet.doc>, accessed on 02/07/2003.
- ³ Barbara Martinez, "Doctors Feel Grip of HMOs Easing," *The Wall Street Journal*, January 16, 2003, p. D4.
- ⁴ For more guidance on who is eligible and who is not eligible for overtime, see the Department of Labor's website at <http://www.dol.gov/elaws/flsa.htm>, accessed on 02/07/2003.

Beginning Workdays:		
52 weeks time 5 days per week		260 days
Less:		
Vacation leave		10 days
Sick leave		5 days
Holidays		9 days
Conventions, training		10 days
Investigator meetings		6 days
Total absences		40 days
Net Workdays per year		220 days