



DAYCARE COMES TO NORTHVILLE

Northville, a medium-sized city in the midwestern part of the United States, has experienced a significant change in the composition of its municipal work force of 1,800 employees. Approximately thirty-five percent of the city employees are now female. In a recent survey of city employees, over forty percent have said that "affordable daycare for children" was important to them. Meanwhile Director of the Office of Personnel Mary Lux has become increasingly convinced that the lack of affordable daycare is one of the main reasons for absenteeism and lateness among city employees. Mayor Petula Spark, some of the members of the city council, and the leader of the major city employees' union, Denardo Legato, all agree that something should be done. The question they are trying to answer is, what should it be?

Mayor Spark is in favor of doing something, in principle, but she is not in favor of incurring a major new expense, given the many legitimate claims on the city's already strained budget. She has told Legato, who is negotiating the daycare program on behalf of the city employees, "We'll give you space and utilities for a year at no cost. It is up to you to come up with a suitable daycare center that conforms to state and federal law." Several regulatory mandates and non-discrimination laws fall into this category. The only requirements specific to daycare centers are that (a) they be licensed and inspected once a year, (b) all new daycare workers take part in a three day state-certified training program and (c) the child/daycare giver ratio be no greater than 8 to 1. The annual inspection fee is \$500. The total cost of the three-day training program is estimated to be \$200 per employee.

Mary Lux is responsible for planning the details of the daycare program for the children of city employees. With Mr. Legato's approval, Ms. Lux has negotiated an arrangement with a local non-profit agency that is already providing daycare services in the Northville metropolitan area. Tiny Tots, Inc. has three locations; the contract with the City of Northville would be a fourth center. The Director of Tiny Tots, Klara Nemet, is enthusiastic about the prospects of a new center specifically for city employees. While discussing the proposed arrangements with Ms. Lux, Ms. Nemet said, "We will not need

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any additional administrative staff, since Ms. Perfekt, my administrative secretary, and I could certainly handle the additional administrative work." Ms. Perfekt earns \$1,300 a month. Ms. Nemet's salary is \$2,400 a month. Tiny Tots, Inc. also must pay 7.15 percent of their salaries in the form of a social security contribution, 8 percent for unemployment and disability benefits; 6 percent of salaries goes to a pension fund, and \$60 per month for health benefits is paid for each of them. These fringe benefits apply to *all* employees of Tiny Tots, Inc.

The additional details of the contract are as follows: the daycare center will be open 20 days every month. Parents pay a monthly fee based on an 8-hour day (9:00 a.m. to 5:00 p.m.). Fees do not vary if less than a full day or less than a month of daycare is used by the parents. Based on projected demand, it is expected that the daycare center will open in January 1997 with 120 children. Ms. Nemet has been successful in negotiating a ratio of 6 children to 1 daycare worker for the first year of operation.

Daycare workers earn \$6.50 per hour. They work from 9 to 5 and get paid for eight hours. Children get a snack and lunch. The food cost is \$3.00 per child per day. The cost of supplies is \$1.50 per child per day. The City of Northville has purchased certain equipment (such as cots and desks) for the first 120 children. However, these costs are estimated to increase by \$50 per child as the enrollment at the daycare center goes up. For the first four months, it is expected that the number of children will grow by 10 percent, beginning in February 2000. Beginning June 2000, the monthly growth is expected to be 5 percent.

Parents pay \$200 per month per child. In the first year, Northville is "donating" space and utilities. Ms. Lux says that this city contribution is worth \$2,000 a month. Mr. Legato says that the union will contribute to the cost of the city's new daycare center by providing \$1.00 per child per day for the children of union members. It is estimated that 70 percent of the children will be children of union members. The state has a subsidized daycare start-up grant for the first year of operation. This grant is \$90,000 a year.

DAYCARE COMPUTER EXERCISE, PART 1

You are a budget analyst in the Budget Office of the City of Northville. Mayor Spark just asked you to "run some numbers" so that she can take a look at the arrangement that was just negotiated between Ms. Lux, Mr. Legato, and Ms. Nemet. You should prepare the budget in a spreadsheet. Since Mayor Spark may ask you some questions about the day care budget, you should prepare the budget using parameters and as many formulas as possible. A well-designed (and flexible) spreadsheet will simplify your task later.

Complete the following tasks and provide the tables and a brief one-page memo describing your findings:

- 1) Prepare the baseline 2000 monthly budget for the daycare. (You can assume a calendar year.) Determine the total surplus and deficit for each month.
- 2) Suppose the child/staff ratio were changed to the maximum allowed by law. What impact would this have on the budget?
- 3) What would happen to the deficit if the enrollment increased by only 5 percent per month for all months?
- 4) What other changes can be made to balance the budget? What are the advantages and disadvantages of these changes? Produce a balanced budget and defend your choice of changes.

DAYCARE COMPUTER EXERCISE, PART 2

It is now September of 2000, and the daycare center has been successfully operating for 8 months. The demand for daycare has been as strong as anticipated, with enrollment growing by 5 percent per month and significant unmet demand. While most of the parameters used to construct the 2000 budget were correct, there are a few adjustments which must be made to personnel scheduling and other cost factors for 2001.

Budget Adjustments

- 1) Tiny Tots, Inc. has started providing paid vacation/personal days to their employees. Daycare workers get 2 weeks of paid time, based on 40 hours per week.
- 2) In 2000, the budget did not include coverage for a lunch hour for each employee. As a result, employees had to work during lunch; that violates union rules. This year, the staff will be provided a one-hour paid lunch (they still get paid for 8 hours/day), and the director is considering using part-time work study college students to cover the lunch hours. The college students have to work at least 15 hours per week and will get paid at the going rate for daycare workers. Lunch hours are from 11 to 2, and employees can be assigned to any lunch hour. (The objective is to schedule lunch hours for the staff to minimize staffing requirements.)
- 3) Daycare workers can work up to 9 hours per day, 40 hours per week, without being paid overtime (time and a half). The personnel costs will rise to:

Wage: \$7.0 per hour

Social Security: 7.5%

Unemployment: 8%

Pension: 6.5%

Health insurance: \$100

- 4) In addition, the center has had to add liability insurance of \$1,000 per month and fire and theft insurance of \$500 per month that will cover any services provided by the center.
- 5) All other costs are expected to increase by an inflation rate of 5 percent during 2001.

Additional Services:

Besides the additional staffing requirements, Tiny Tots is thinking of adding additional services to the daycare center:

- 1) Expanded hours for the day care from 8:00 am to 6:00 pm. The children are expected to come in two shifts;
 - 8:00 am: 70 percent of children
 - 10:00 am: 30 percent of children

- 2) Adding care for infants during these expanded hours. (They are expected to arrive in the same percent for each time as toddlers.) The staffing ratio can be no higher than 3 infants to 1 staff person. The staff would receive the same pay and benefits as those taking care of toddlers. Food and equipment costs are expected to be the same per child. The city will subsidize equipment for the first 100 infants. The director expects to start in January 2001 with 100 infants and would like to maintain roughly a ratio of 3 toddlers for each infant in the center.

Presently, the daycare center is housed in an old school that is not being used by the city. While the city agreed to provide free space and utilities the first year, the mayor has said this will not be possible for 2001. The city is willing to lease the full facility and provide utilities for \$2,000 per month. The school has 8,000 square feet, and state regulations require the following square footage for children;

15 square feet/toddler
10 square feet/infant

ASSIGNMENT: Modify your spreadsheet from Part 1 to incorporate these changes. Save your original version for Part 1 just in case! You can assume that the child/staff ratio for toddlers will be maintained at 6/1. Carry out the following tasks and provide a copy of your tables and a one-page memo summarizing your results:

- 1) Develop the 2001 budget by month with these changes. Determine the total expenditures and expenditures per child. The director would like the budget broken into the two "mission centers" and variable, step, and fixed costs indicated. You should assign indirect costs to each mission center using the most appropriate allocation factor. (Justify your choice.) Enrollment in the center could continue to grow by 5 percent per month as long as space is available. Assume that the monthly rate is \$300/month for childcare.

- 2) Assuming that the center receives subsidies of;
 - \$3/day/child for day care.

How much would daily fees to parents have to be to break even? Assume that:

- a) the same fees for childcare are charged per child (whether infant or toddler).

- b) different fees can be charged for each mission center to cover the costs of this center.

c) the city adopts a sliding scale fee based on income. Assume that city employees can be grouped into three income classes:

Low income:	average \$15,000/year
Middle income:	average \$30,000/year
High income:	average \$50,000/year

and that city workers are evenly divided between these income classes. Assume that fees for toddlers in a particular income class will be the same as infants in that class. Develop a sliding scale fee that will cover the center's deficits for 2001. Justify your choice of fee. (Hint: Calculate effective tax rates).