

Budgeting a Combined Health Department

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MERGING separate city and county health departments into one organization results in certain advantages, but specific obstacles must be overcome before the combined unit can be considered successful.

The foremost problem confronting any such combined department is that of obtaining an adequate budget. This is sometimes complicated by the city and county governments' differing on the amount each should contribute to the health department budget. Theoretically, the amount should be worked out between the two governments without any help or hindrance from the health department. When agreement is lacking, however, the department may find itself in the unwanted but necessary position of arbitrator, especially if lack of agreement threatens dissolution of a combined unit before there has been sufficient opportunity to demonstrate the advantages of combination.

The Pueblo City-County Health Department in Colorado was organized in July 1952. By written agreement, the city and county of Pueblo gave the new department the balance of the funds unexpended from the budgets of the former health departments, with which the new department was to operate until January 1953. Unfortunately, the written agreement between the city and county of Pueblo, permitting the formation of the department, contained nothing concerning the future financing of the de-

partment. This was a serious oversight, for the city and county governments had diametrically opposite viewpoints on the matter.

Pueblo County has a population of about 120,000. Approximately 80 percent of the population is in the city of Pueblo. There are only two, very small, incorporated communities in the county besides Pueblo. Most of the remaining population is in the fringe around the city of Pueblo.

City and County Debates

Before 1952, the county health department consisted of two nurses, a sanitarian, and a part-time health officer. Compared with the city health department, the operation was small. After the merger, the county government reasoned that its share would be proportionate to the population of the county excluding the city of Pueblo.

The city government postulated that since the residents of the city paid county taxes, they should expect to get health services from the county. In the city's opinion, it would be logical for the city to withdraw all its contributions and let the county assume the entire operation of the health department. The county countered by explaining that since the people of the city lived in a congested area, they had more public health problems, would need more health department services, and should expect to contribute more to the budget.

This debate continued each time the health department budget was presented from 1952 to 1956. Much time was wasted by all concerned. In 1955, the health officer went to 10 meetings in which the proportionate share of the budget was the only item discussed. Each year, some

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kind of compromise was reached; yet neither government felt that the arrangement was equitable.

In 1956, a complete impasse was reached in what had now become the routine annual health department budget conferences. Everyone had grown weary of hearing the same arguments over and over again without resolution. The inability of the two governments to reach agreement had nullified the otherwise increased efficiency of the health department. The dissolution of the combined department was imminent.

Devising a Formula

At this crucial moment, the department found it necessary either to assume the undesirable position of arbitrator or to see several years of hard work and progress go for naught. An attempt was made to express in mathematical terms population, taxes, and services within the city and county area outside the city. Population was eliminated as a necessary ingredient in the formula since for several reasons the services were not given on a proportionate basis. For example, the department provided the school nursing program in the county area, while the city schools had continued their own nursing program at the time. The idea was that, if the formula could correlate the extent that the city population was taxed with the amount of health services they received, the city's share of the budget could be determined equitably.

The formula, as originally presented to simplify explanations, was as follows:

$$C + E_c (B - C) = S_c B$$

where

C = The city's share of the health department's budget.

E_c = The assessed valuation of the city, expressed as a percentage of the total county valuation.

B = The net budget to be divided between the city and the county. (State contributions, income on vital statistics, and other funds would be subtracted from the gross budget to obtain the net budget.)

$(B - C)$ = That part of the budget paid by the county.

S_c = The percentage of the health department services provided inside the city.

The left side of the formula is the entire amount paid by the city, the funds coming

from the city's separate contribution and from the county for the county taxpayers living in the city. The contribution by the city subtracted from the total net budget represents the amount paid by the county. When the amount paid by the county is multiplied by the percentage of the county valuation inside the city, the portion of county taxes collected from the city residents is accounted for.

The right side of the formula represents what the city receives for the moneys paid. If the city receives a certain percentage of the services of the health department, then it is obligated to pay that percentage of the budget. This also holds true for the county. The formula is based upon each paying for the services received.

A similar formula could be worked out to determine the county's share, but this would be unnecessary. The formula is set up to determine the city's share of the budget, and the county's share can be determined by computing $(B - C)$.

Calculating the City's Share

Except for S_c , all factors in the formula were known. The percentages of services provided in the city (S_c) could be determined from the daily activity reports in the Pueblo City-County Health Department. Statistically, this figure can be determined within reasonable accuracy without adding appreciably to the time required to prepare daily activity reports. The department personnel had been preparing activity reports for several years, although no differentiation between city and county work was made prior to January 1, 1956.

The manner in which the services given to the city is calculated seems complicated, but actually it is very simple administratively. Each person in the field codes the number of hours spent for the city and county. Office time and time spent on activities that cannot be conveniently broken down into city and county components are ignored, since they should be proportionate to the time spent on the various activities in the field.

General expenses, such as the health officer's salary and commodities used by the entire department are assumed to be proportionate to the division of the field services. Since field services were coded in the past, it did not add to the

department's administrative effort to code for the city and county breakdown.

For example, during the month of June, sanitarian "A" spent 87 hours for the city and 30 hours for the county in the field, thus 74 percent of his services were allotted to the city and 26 percent to the county. The entire division of sanitation field services were coded and tabulated in a similar manner. For the month of June, the department spent \$1,599.81 for salaries and retirement for the sanitarians doing work in the city. This was 69 percent of the total. In addition to the sanitarians, the sanitation section has other expenses such as the supervisor's salary, the secretary's salary, automobile expenses, vacation and sick leave, and laboratory expenses. All the above expenses are prorated by 69 percent and charged to the city. The sanitation section expended \$2,402.26 (69 percent) for the city and \$1,079.28 (31 percent) for the county during the month of June 1956.

The same procedure is used for the nursing, meat inspection, and vital statistics sections. These are the services that can be accurately divided into city and county components. The expenditures of each of these sections, according to the city and county divisions, are then totaled. In June, this amounted to \$6,505.11 (66 percent) for the city and \$3,327.20 (34 percent) for the county.

With the calculations for S_c completed, all factors in the formula were known.

Explaining the Formula

Our first problem, after we had established the validity of the formula through several critical reviews, including a legal review, was to explain the formula to officials unaccustomed to thinking in algebraic terms. The first step was to transpose the formula in order to show the city's share of the health department's budget. Thus:

$$C = \frac{B(S_c - E_c)}{1 - E_c}$$

Hypothetical values were then substituted for

the symbols in our explanation. For example, if the city had 50 percent of the assessed valuation and the health department was giving the city 50 percent of its services, then the city government should not be required to supply additional money to the department. Assuming that the budget is \$100,000, then

$$C = \frac{\$100,000 (0.5 - 0.5)}{1 - 0.5} = \frac{\$100,000 \times (0)}{0.5} = 0$$

If, however, the assessed valuation remains at 50 percent, but the city receives more services, then the city would be required to provide additional funds. Assuming that the net budget remained at \$100,000 and the city received 75 percent of the health department's services, then the city's additional obligation can be determined:

$$C = \frac{\$100,000 (0.75 - 0.5)}{1 - 0.5} = \frac{\$100,000 (0.25)}{0.5} = \$50,000$$

As the result of our efforts to devise a formula and our success in explaining it, both city and county governments agreed that the formula provided a fair and equitable means of determining their share of the budget. A new contract incorporating the formula was prepared and signed by both parties.

Conclusion

It is felt that this formula can be used successfully by other departments. The type of service will vary with each department, but the coding procedure can be adapted to meet the individual situations with ease.

The formula would be particularly applicable to combined departments where more than one governmental unit contributes to the budget. This would be true where several counties were combined into a district health department or where several cities within the jurisdiction of a county health department are expected to contribute to the department budget. The use of the formula should tend to eliminate much unnecessary work for those seeking approval for combined health department budgets.