

Calculating and Apportioning the Costs of Shared Service Activities

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Cost Allocation in Shared Service Activities

How do we account for and determine the shared costs of shared public health services?

Essential point: “Cost allocation schemes are like snowflakes...”; There is no standard approach

Focus today on The “Seven Basic Strategies” for cost allocation of shared public health activities

A Quick Example - Hypertension Prevention and Management

"County A" and "County B" are negotiating a sharing arrangement for hypertension prevention and management (HPM) services.

HPM program's total cost = \$500,000; mostly public health nurses, a program coordinator, space, and travel

Counties have different demographics and HPM service needs:

- County A has a larger population
- County B's median household income is higher
- County A has far more cases of Type II diabetes

Allocation formula:

$$\frac{\$500,000}{2 \text{ counties}} = \$250,000 \text{ per county}$$

Advantages: simple, transparent

Disadvantages: does not relate to underlying *cost drivers*

Per Capita Sharing

If County A's population is 240,000, and County B's population is 160,000 then:

Allocation Formula:

$$240,000/400,000 = .6 = \text{County A's share of service population}$$

$$160,000/400,000 = .4 = \text{County B's share of service population}$$

Therefore:

$$\$500,000(.6) = \$300,000 = \text{County A's cost share}$$

$$\$500,000(.4) = \$200,000 = \text{County B's cost share}$$

Advantages: Simple, transparent, perceived fairness

Disadvantage: Population may not correlate well to actual costs, cost drivers, or program objectives

Cost Plus Fixed Fee

Generally a per capita allocation, plus some additional fee to cover start-up costs

For example, County B might adjust its per capita share from \$200,000 to \$235,000 to compensate County A for hiring a new program coordinator at the beginning of the year

Advantage: Helps address challenges of "fixed" or "step-fixed" costs

Disadvantage: Fees are often arbitrary and difficult to negotiate later on

Ability to Pay

If County A's per capita income is \$40,000 and County B's per capita income is \$50,000, then:

$$\$40,000/\$90,000 = .44 = \text{County A's share of the "Wealth Factor"}$$

$$\$50,000/\$90,000 = .56 = \text{County B's share of the "Wealth Factor"}$$

Therefore :

$$\$500,000(.44) = \$220,000 = \text{County A's cost share}$$

$$\$500,000(.56) = \$280,000 = \text{County B's cost share}$$

Advantage: Perceived fairness

Disadvantage: Politically contentious

Incidence or Prevalence

If there are 12,740 known annual cases of Type II Diabetes in County A, and 5,460 known cases in County B, then:

$$12,740/18,200 = .7 = \text{County A's share of "HPM Prevalence"}$$

$$5,460/18,200 = .3 = \text{County B's share of "HPM Prevalence"}$$

Therefore :

$$\$500,000(.7) = \$350,000 = \text{County A's cost share}$$

$$\$500,000(.3) = \$150,000 = \text{County B's cost share}$$

Advantage: Often perceived as most fair

Disadvantage: Measurement issues, especially for preventative services

Weighted Formula

We can combine population, ability to pay, and incidence into a single "weighted formula"

Imagine County A and County B agree to weight ability to pay as 50% of the formula, and population and incidence as 25% each. The allocations for County A/County B for population are .6/.4, for incidence they're .7/.3, and for ability to pay they're .44/.56. The formula here is:

$$\text{County A: } .6(.25) + .7(.25) + .44(.5) = .15 + .175 + .22 = .545$$

$$\text{County B: } .4(.25) + .3(.25) + .56(.5) = .1 + .075 + .28 = .455$$

Therefore:

$$\$500,000(.545) = \$272,500 = \text{County A's cost share}$$

$$\$500,000(.455) = \$227,500 = \text{County B's cost share}$$

Fee for Service

If the full cost of an HPM outreach/counseling session is \$200, and the HPM program delivers 750 sessions in County A and 1,750 sessions in County B, then:

$$750(\$200) = \$150,000 = \text{County A's cost share}$$

$$1,750(\$200) = \$350,000 = \text{County B's cost share}$$

Advantages: Connects costs to cost drivers; transparent

Disadvantages: Difficult to implement without good data on direct costs, indirect costs, service delivery; might not be directly connected to the mission