

Costs of Process Improvement			
Salaries	\$	(100,000)	
Fringe Benefits	\$	(100,000)	
Supplies & Services	\$	(20,000)	
Other	\$	-	
Costs of Process Improvement	\$	(220,000)	
Cash Flow Impact of the Improvement			
Changes in Net Revenue Associated with			
Case based reimbursement	\$	-	
Per Diem reimbursement	\$	(96,000)	
Percentage of Charges reimbursement	\$	-	
Medical Device Revenue	\$	-	
(Revenue = device cost and markup)			
Drug Revenue	\$	(10,000)	(106,000)
(Revenue = drug cost and markup)			
Changes in Operating Cost Associated with			
Supply costs driven by changes in patient days	\$	15,000	
Medical device changes	\$	-	
Medication substitution	\$	25,000	40,000
The Cash Flow Impact of the Improvement	\$	(66,000)	
Backfill Cash Flow Estimate			
Incremental Net Revenue Associated with Backfill			
Case based reimbursement	\$	243,902	
Per Diem reimbursement	\$	96,000	
Percentage of Charges reimbursement	\$	48,780	388,683
Medical Device Revenue	\$	-	
(Revenue = device cost and markup)			
Drug Revenue	\$	10,000	398,683
(Revenue = drug cost and markup)			
Incremental Operating Costs Associated with Backfill			
Incremental supplies	\$	(15,000)	
Medications	\$	(25,000)	
Medical Devices	\$	-	(40,000)
The Cash Flow Impact of Potential Case Backfill	\$	348,683	
Backfill Cash Flow Estimate			
Cost of Process Improvement	\$	(220,000)	
Cash Flow Impact of the Improvement	\$	(66,000)	
Net Cash Flow Improvement Exclusive of Potential Case Backfill	\$	(286,000)	
Cash Flow Impact of Potential Case Backfill	\$	348,683	
Total Cash Flow Impact from Process Improvement Initiative	\$	62,683	

Figure 11-4 VHA cash flow analysis template.

Source: Reproduced from: "Faster Labs: Process Improvement Initiative Cash Flow" spreadsheet from the Financial tab of "Building the Business Case for Clinical Qual-

rates of return over time is unlikely to lead to expansion of services for those who can pay little or nothing.

CONCLUSION

Decision makers need to know what a program will cost; what revenue, if any, it will generate; and how and by whom the balance will be financed. They also have to present a convincing case that the current and future benefits to patients, payers, and the public justify the investment. Cash-flow management also is important, even if it is not usually considered part of health policy analysis. Comparative tools, such as cost-benefit analysis and cost-effectiveness analysis, are basic tools of policy analysis, but they present a number of ethical and value-based concerns. They are critical to the budget and adoption approval processes and to gaining top-level support for proposals. Smaller organizations also have to worry about the sources of working capital necessary to undertake and sustain both current and higher levels of activity. For them, "cash flow is king." Although some may see financial viability analysis as "the dark side" of policy analysis, competency in this area is a must.

Case 11 Increasing the Federal Cigarette Excise Tax

When the Congressional Budget Office (CBO) (2012) published *Raising the Excise Tax on Cigarettes: Effects on Health and the Federal Budget*, its stated motivation was "to demonstrate the complex links between policies that aim to improve health and effects on the federal budget" (p. iii). According to this June 2012 report, "A policy that discourages smoking by raising the excise tax on cigarettes provides a good case study because a substantial body of research exists about the effect of changes in cigarette prices on smoking rates, as well as about the impact of smoking on health, health care spending, longevity, and (to a lesser extent) earnings" (p. 2).

Policy and budget analysts evaluated the impact of a hypothetical \$0.50 increase (adjusted for inflation) in the federal excise tax on cigarettes and small cigars. At the time of the report, the federal tax was \$1.01 per pack. It had been increased in 2009 from \$0.39 by the ACA. State excise taxes ranged from \$0.17 in Missouri to \$4.35 per pack in

There are four general methods of rectifying maldistribution if the market fails to correct the problem over time. According to Wheelan (2011), they are:

- Regulation or deregulation
- Incentives and disincentives, including taxes and subsidies
- Direct government services delivery
- Contracting with the private sector to deliver service

The ACA incorporated all four methods. Everyone must have health insurance or be taxed. Subsidies are provided to those who cannot pay the full premium. The government provides insurance exchanges to facilitate the market and also pays providers through Medicaid.

COMPARING WITH COMPETING ALTERNATIVES

The ratios that we have been studying (benefit/cost and cost-effectiveness) have little meaning in and of themselves. They are useful only in comparison with either a minimum standard value or in terms of rank ordering a set of alternatives. Sometimes a set of subcategories are used, such as the following:

- Absolutely necessary because of the regulation or risk to the patients
- High priority in terms of meeting overall organizational goals
- Medium priority
- Low priority

Where there are subcategories, the ratios may be used to rank order alternative investments within each category. Setting priorities may be one way to recognize some of the political pressures that might otherwise overwhelm simple league-table rankings (similar to those used to display team standings in sports).

FINANCIAL FEASIBILITY

An organization's financial system must be up to evaluating an alternative's costs and forecasting the financial implications of various funding alternatives. Cleverley and Cameron (2003) suggested three major target areas of financial strategic planning for health organizations:

- Revenue estimation
- Capital budgeting (more of a concern for organizations that pay income tax)
- Financing of operations and capital investments

They expanded on these by suggesting that the underlying financial systems must

- Provide data on revenue, costs, and capital requirements according to program or product lines.
- Adjust these estimates for inflation and increasing technology requirements.
- Supply ROI or IRR estimates for decision making.
- Estimate working capital and cash reserve requirements under expected operating conditions.
- Establish the desired capital structure given the organization's debt capacity.
- Provide procedures for the allocation of capital among competing internal programs and facilities.

The first three steps are the same in both the public and private sectors. The last two are especially important to organizations and companies operating in the private sector. Even governmental programs that are separately funded, such as Medicare, have to estimate flows and reserves. The actuaries at the Centers for Medicare & Medicaid Services (CMS) are the ones who keep telling us when the Medicare trust funds will run out.

It is important to recognize that different parts of the organization may disagree on the value of an activity, such as reducing the length of stay, depending on whether they are looking at full costs or marginal costs, whether they consider the organization to be at capacity or below it, and how the reimbursement system operates (Ward, Spagens, & Smithson, 2006). In response to this concern, Voluntary Hospitals of America (VHA) has developed a template for evaluating the cost, revenue, and cash-flow impacts of various proposals. **Figure 11-4** analyzes a proposal to improve hospital laboratory turnaround times, thus reducing the overall average length of stay by 0.1 days. It then proceeds to evaluate three types of costs: the cost of the project, the cash-flow impacts of the cost reduction, and the cash-flow impacts of the new patients that can be accommodated in the freed-up beds (called backfill).

Capital Allocation Processes

Capital investments is one area where facilities and services available to the poor and the uninsured are likely to be shortchanged over time as large multisite health care organizations seek to maintain reasonable payer mixes and returns on their investments (Hurley, Pham, & Claxton, 2005; Robinson & Dratler, 2006). The use of analytical techniques to estimate

If you were looking at the prices charged by pharmaceutical manufacturers, the forecast of prices would grow at whatever rate you thought appropriate. If you chose 4.2% over a 5-year period, then the price of drugs now at \$200 would be calculated in the fifth year to be \$200 multiplied by 1.042⁵, or \$245.68. This is based on a mixture of products, some of which might be going up rapidly, whereas others become generic and go down markedly.

DEALING WITH IMPORTANT UNCERTAINTIES

There are three approaches one might use to deal with important uncertainties in the financial analysis:

- Adding a risk premium to the discount rates used for uncertain parts of the calculations. This means that different streams of costs and benefits will be adjusted at different rates because they will have different uncertainties associated with them.
- Developing a subjective probability distribution for those values and applying that distribution to the modeling process. If there is a 60% chance that a program will cost \$100,000, a 30% chance that it will cost \$110,000, and a 10% chance that it will cost \$90,000, the expected value would be:

$$([100,000 \times 0.6] + [110,000 \times 0.3] + [90,000 \times 0.1]) = \$102,000$$

This value could be substituted for the \$100,000 value to adjust for uncertainty in costs.

- Investing in further research to reduce the uncertainty. For example, one could refine the cost estimate until one was relatively certain that \$100,000 was the proper mean estimate of the cost and then use that.

Evaluating Public Health Interventions

Because medical care and public health are both government functions in the U.K., the government has wrestled with whether the two delivery systems should use a common set of evaluation measures. Edwards, Charles, and Lloyd-Williams (2013) have reviewed the guidance issued on this by the U.K. government and by international agencies. These documents seem to agree that QALYs are appropriate for medical care evaluations, but may not be so for public health investments. The latter often involve changing the behaviors of individuals and populations, and these changes typically

take place over considerable periods of time and affect many other aspects of personal and public life. These documents suggest that programmatic effects that are not medical be included. Some would value all costs and benefits in local currency leading to a cost-benefit analysis. Others would use multidimensional scaling to include QALYs with other effects, such as personal competency, into a single metric. Money as a common metric allows a public investment approach that can use the IRR as the prioritizing metric.

IDENTIFYING FINANCING METHODS

Where is the money for the investment coming from, even if it is offset later by benefits? Those benefits may or may not generate adequate cash flow into the organization. For example, money spent on smoking cessation programs by a state government would ultimately reduce the costs of its Medicaid program, but much of the benefit accrues to the federal government, to insurers, and to individual citizens; thus, there must be a budgetary source of funding specifically for the advertising campaign. For this reason, one is unlikely to spend most of the available budget on one program with a highly favorable ratio because it would crowd out other meritorious programs and threaten the organizational and political coalitions that make a budget viable. To match the acceptable share of available funds better, any very large program investment is likely to seek multiple sources of funding or spread out the investment over multiple budget cycles.

CONSIDERING DISTRIBUTIONAL EFFECTS

Financial decisions affect both actors and nonactors. There are issues of externalities and free riders and moral hazard associated with some alternatives. There also are impacts on provider income, payer cash flows, and patient cash flows. In a financial sense, every proposal can be considered a zero-sum game in which there are winners and losers under our current set of incentives. Professionals are usually paid more for doing more. Vulnerable patients often end up paying more than those strong enough to monitor their own care and bargain on price. The health policy analyst must “follow the money” without becoming too cynical and attributing all motivation to greed. Health care is a mixture of necessities and consumption goods. Consider that during both the Great Recession of 2007 and the Great Depression of the 1930s, birth rates dropped to new lows as many families put off having more children.

An Example

If a proposed program were to cost \$100,000 but yield a stream of benefits annually starting at the end of 5 years for 5 more years, we would have the following calculations to make to arrive at a NPV using a 4% discount rate: Investment at the beginning of Year 1 of \$100,000.

<i>Benefits</i>			
Year 6	\$40,000	$NPV = (40,000)/[(1 + .04)^6]$	$= \$31,612.58$
Year 7	\$40,000	$NPV = (40,000)/[(1 + .04)^7]$	$= \$30,396.71$
Year 8	\$40,000	$NPV = (40,000)/[(1 + .04)^8]$	$= \$29,227.61$
Year 9	\$40,000	$NPV = (40,000)/[(1 + .04)^9]$	$= \$28,103.47$
Year 10	\$40,000	$NPV = (40,000)/[(1 + .04)^{10}]$	$= \$27,022.57$
Total Benefit			\$146,362.94

The same result can also be calculated assuming a 10-year stream of benefits from which the initial 5 years of the stream has been subtracted. Using a NPV table, we would then calculate the following:

$$\begin{aligned} NPV &= 10\text{-year stream} - 5\text{-year stream} \\ &= \$40,000 \times (8.1109 - 4.4518) \\ &= \$146,364 \end{aligned}$$

Computing Ratios

Ratios are easy to compute. In the previous example, the NPV of the investment is \$100,000 and the total benefits are \$146,364; thus, the benefit-cost ratio is $(146,364/100,000)$, or 1.46. This would be a comparison figure to rank order with other social or corporate investments. Each investment would then be subjected to other comparative evaluations or perhaps a minimum target IRR. IRR is the discount rate at which the benefits and the costs equal each other (i.e., the rate that brings the NPV to 0). In the previous example, the IRR is 9.155% (computed by finding the r value in the preceding example that makes the present values of investments and the benefits equal). This rate can then be compared with the cost of capital and/or financing the investment. It must also be evaluated in terms of the uncertainty of the values used, the distributional impact on various actors and bystanders, the impact on other programs (especially in terms of budgets available), and financial viability.

Inflation Adjusting

A constant inflation rate produces a cumulative geometric increase in costs. Over time, analyses can be very sensitive to the inflation effect, especially

in health care, where overall inflation rates are high. However, the inflation rate in health care costs reported in the popular literature is the result of a number of factors, including the following:

- Input prices for labor and purchased goods
- Increasing technological opportunities, including pharmaceuticals
- Aging of the population

The costs of a given program, however, are not necessarily subject to all of these factors, and thus one has to be careful in the selection of an appropriate rate. Because the population is defined and the technology is assumed to be fixed for comparative purposes, the appropriate inflation rate for an analysis is often the first item chosen for sensitivity analysis because it affects the input prices for labor and purchased goods. A reasonable lower bound on this rate is the consumer price index (CPI), but because health care is a labor-intensive professional service that does not usually exhibit the same productivity improvements as much of the rest of the economy, the appropriate rate is somewhat higher than the CPI. Available indices applicable to components of an analysis include producer price indices for specific segments and medical care CPI price deflators. Newhouse (2001) estimated that historically inflation in health care costs has been about 2% above the overall CPI. He also noted that the available indices may be biased on the high side, in part, because of the lack of reliable data on real transaction prices. For example, the producer price index for pharmaceutical preparation manufacturing was as follows:

1995	253.9	2001	314.5
1996	259.1	2002	326.7
1997	290.1	2003	343.3
1998	298.5	2004	360.1
1999	306.6	2005	378.7

To determine a rate of change from raw data, use this formula:

1. Decide on the number of years in the interval (try 5 and 10).
2. Divide the ending index by the initial one:

$$\begin{aligned} 5 \text{ years} & \quad 378.7/306.6 = 1.235 \\ 10 \text{ years} & \quad 378.7/253.9 = 1.492 \end{aligned}$$

3. Set the number of years equal to N , and take the N th root of the appropriate value above.

$$\begin{aligned} 5 \text{ years} & \quad (1.235)^{(1/5)} = 1.0431, \text{ meaning a 4.3\% inflation rate} \\ 10 \text{ years} & \quad (1.492)^{(1/10)} = 1.0408, \text{ meaning a 4.1\% inflation rate} \end{aligned}$$

more recently has suggested an upper limit of \$5 million (Applebaum, 2011). Lives-saved reconciliation is difficult to achieve due to lack of a quality adjustment. For example, many Americans might prefer dying in a car accident to a long bout with terminal cancer.

Determining the Present Value of Costs and Outcomes

If we asked you for \$10 and paid it back tomorrow, you probably would be okay with that. If we requested \$10 and said that we will return it to you in 5 years, you probably would decline the honor. The value of money has a time dimension with two components: (1) whether it will have as much utility in the future or whether inflation will reduce its purchasing power and (2) the lost opportunity to create utility with it in the interim. Analysts adjust for the latter by applying a discount rate. The discount rate may represent interest income forgone or what one would have to pay to borrow the money at interest to operate until the payoff takes place. Economists argue not over whether the time value of money should be recognized, but over the appropriate rates to use; however, there are legitimate concerns about how inflation adjusting and discounting tends to devalue programs such as preventive care that pay off a ways into the future.

Discounting

The time value of money concept also applies to discounting, except that the values of future benefits and costs are reduced to a net present value (NPV). Each stream of both costs and benefits needs to be brought back to a current value using the formula:

$$\text{NPV}(V_t, N, r) = V_0 + \frac{V_1}{(1+r)} + \frac{V_2}{(1+r)^2} + \frac{V_3}{(1+r)^3} + \dots + \frac{V_N}{(1+r)^N}$$

where V_t = the value of the cost or benefit in time period t , N = the number of periods in the series, and r = the discount rate to be used.

Analysts can calculate these values directly using a spreadsheet model or function or they can use the discount factors from a NPV table similar to the one in Table 11-1. For example, if the annual benefit received from a program is \$10,000 and the discount rate chosen is 6%, then the NPV of benefits received over 5 years would be worth \$42,124 ($\text{NPV} = \$10,000 \times 4.2124$).

Table 11-1 Present Value of a Dollar Received in Year N at Discount Rate r

N	r =	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
1		0.97087	0.96154	0.95238	0.9434	0.93458	0.92593	0.91743	0.90909
2		0.9426	0.92456	0.90703	0.89	0.87344	0.85734	0.84168	0.82645
3		0.91514	0.889	0.86384	0.83962	0.8163	0.79383	0.77218	0.75131
4		0.88849	0.8548	0.8227	0.79209	0.7629	0.73503	0.70843	0.68301
5		0.86261	0.82193	0.78353	0.74726	0.71299	0.68058	0.64993	0.62092
6		0.83748	0.79031	0.74622	0.70496	0.66634	0.63017	0.59627	0.56447
7		0.81309	0.75992	0.71068	0.66506	0.62275	0.58349	0.54703	0.51316
8		0.78941	0.73069	0.67684	0.62741	0.58201	0.54027	0.50187	0.46651
9		0.76642	0.70259	0.64461	0.5919	0.54393	0.50025	0.46043	0.4241
10		0.74409	0.67556	0.61391	0.55839	0.50835	0.46319	0.42241	0.38554
11		0.72242	0.64958	0.58468	0.52679	0.47509	0.42888	0.38753	0.35049
12		0.70138	0.6246	0.55684	0.49697	0.44401	0.39711	0.35553	0.31863
13		0.68095	0.60057	0.53032	0.46884	0.41496	0.3677	0.32618	0.28966
14		0.66112	0.57748	0.50507	0.4423	0.38782	0.34046	0.29925	0.26333
15		0.64186	0.55526	0.48102	0.41727	0.36245	0.31524	0.27454	0.23939

Cumulative Present Value of a Dollar Received Annually for N Years Discounted at Rate r

N	r =	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
1		0.97087	0.96154	0.95238	0.9434	0.93458	0.92593	0.91743	0.90909
2		1.91347	1.88609	1.85941	1.83339	1.80802	1.78326	1.75911	1.73554
3		2.82861	2.77509	2.72325	2.67301	2.62432	2.5771	2.53129	2.48685
4		3.7171	3.6299	3.54595	3.46511	3.38721	3.31213	3.23972	3.16987
5		4.57971	4.45182	4.32948	4.21236	4.1002	3.99271	3.88965	3.79079
6		5.41719	5.24214	5.07569	4.91732	4.76654	4.62288	4.48592	4.35526
7		6.23028	6.00205	5.78637	5.58238	5.38929	5.20637	5.03295	4.86842
8		7.01969	6.73274	6.46321	6.20979	5.9713	5.74664	5.53482	5.33493
9		7.78611	7.43533	7.10782	6.80169	6.51523	6.24689	5.99525	5.75902
10		8.5302	8.1109	7.72173	7.36009	7.02358	6.71008	6.41766	6.14457
11		9.25262	8.76048	8.30641	7.88687	7.49867	7.13896	6.80519	6.49506
12		9.954	9.38507	8.86325	8.38384	7.94269	7.53608	7.16073	6.81369
13		10.635	9.98565	9.39357	8.85268	8.35765	7.90378	7.4869	7.10336
14		11.2961	10.5631	9.89864	9.29498	8.74547	8.24424	7.78615	7.36669
15		11.9379	11.1184	10.3797	9.71225	9.10791	8.55948	8.06069	7.60608

department, or other organizational unit and then dividing it by the number of service units or products produced. This figure is usually relatively easy to produce from existing departmental cost data, but using this method is not recommended. It does not take into account how processes, and hence costs, change with volume, nor does it include relevant costs that occur outside of the given organizational unit. Relevant costing ignores those costs that are not affected by a decision, including those that are real but fixed. For example, the comparison of two treatments for pneumonia would not include the costs of diagnostic tests unless different test protocols were associated with the new treatment regimen.

Relevant costs for the two treatments are likely to include the following:

- Changes in costs of medicines, consumable supplies, and tests caused by the introduction of the alternative method
- Changed labor costs, including physicians, nurses, and pharmacists, and ancillary services
- Costs altered by the changes in length of stay or location of treatment
- Changes in costs incurred by the patient and the patient's family, including access costs and lost income, if any
- Changes in overhead costs associated with the new alternative including amortization of new specialized equipment and altered space requirements

Hospital costs represent an especially difficult problem because so many costs are lumped into the overhead cost categories and then allocated to the various operating departments.

A process-based cost study is usually a must in the hospital setting. The usual hospital cost reports are so loaded with fixed costs that it is necessary to map out the process, directly identify the resource inputs required, and then price them.

Marginal/Incremental Cost Concepts

Where demand is changing, the appropriate cost is not the average cost of the service, but the cost of adding the next additional service unit (the marginal or incremental unit) or subtracting it. Even though pricing, and hence revenue, may be related to the average cost of a unit of service, the cost of changing output is not. If I am the dean of a medical school and am asked to add 10 more students, I may find that my costs of the preclinical lectures are nil, because there are extra seats in the lecture hall. However,

during the clinical years I may find that I have to divert clinical faculty from clinic hours to rounding with students at considerable opportunity cost of revenue. I will also have to add desks in the anatomy lab and secure more cadavers. These incremental costs may be very different from what one gets by dividing total existing costs by the current number of students.

Handling Inherent Process Uncertainty

Earlier chapters dealt with the technological and political uncertainties of producing a desired outcome. The analysis team must decide how to deal with those uncertainties in its economic and financial analysis. Sometimes the uncertainty is handled with multiple analyses up front, a sort of branching in the analysis; however, the usual way of handling uncertainties is through sensitivity analysis in which the inputs of uncertain parameters are allowed to take on a realistic range of values to define the range over which the analysis is sensitive to that parameter.

For example, in the Washington State study of evidence-based treatment of substance abuse and mental illness disorders, the Washington State Institute for Public Policy conducted a sensitivity analysis with many different parameters using a Monte Carlo simulation technique. Researchers assigned a probability distribution to each range of values and ran the simulation model 10,000 times with the values of each variable sampled randomly from its distribution. This process indicated that there was only a 1% probability that the investment would provide a negative return to the taxpayers. This was very important to the credibility of the analysis, because so many of the measures and variables were so difficult to define and to measure (Aos et al., 2006).

Much of the value of a simulation would be to identify the interaction of various factors as a policy is implemented. For example, we have seen a number of governors prepared to ensure access to health care for virtually all their state's population; however, very little has been said about what will happen to health care demand and supply and the resulting prices. Given the rapid rise in prices following the starts of Medicare and Medicaid in 1965, this has to be a matter for concern given the access-expanding provisions of the Affordable Care Act (ACA).

Figure 11-3 illustrates one model that might be used to simulate the effects of increased access. As demand increases, so do the direct costs of services and the capital costs of providing the necessary delivery infrastructure, especially supplying sufficient primary care providers (PCPs), nurses, and community-based services; however, these changes will not

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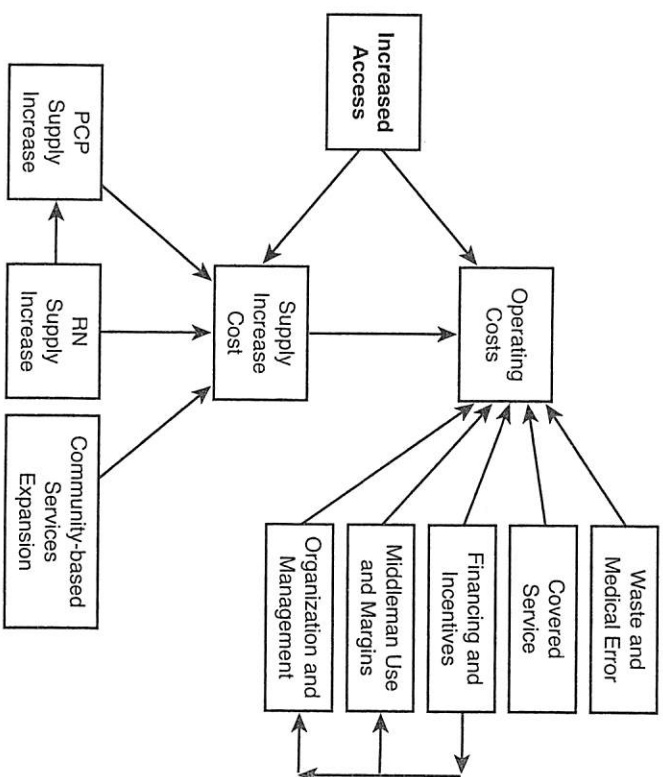


Figure 11-3 What happens to costs, if we resolve the general access problem.

take place in a vacuum. Policy variables can be manipulated to affect those costs, including the new covered service definitions, the management and organization of the new efforts, the amount of waste and medical error experienced, the financing and incentives of the program, and whether middlemen are used and what their margins will be. This again would seem to call for a simulation model to assess the overall impact of the planned interventions. The model is not revenue or budget constrained, but that component also could be added. This model might start as a spreadsheet model, but be converted to a Monte Carlo simulation if one wanted to see how sensitive the model would be to specific uncertain variables.

What additional variables and/or feedback loops would you like to add? If there are many loops, a feedback type of model might be used. Certainly, the organization and management of services and the financing and incentive available would affect the capacity changes that might be needed. For example, a Markov model of colon cancer disease states would have some Stage 3 patients fed back into the healthy but at-risk pool after surgery, whereas others would not respond to treatment and would stray at Stage 3 or progress to Stage 4.

VALUING THE OUTCOMES PRODUCED

A hard part of health care policy analysis is valuing the benefits. We have already addressed the willingness-to-pay argument versus the use of utility metrics such as QALYs saved or deaths avoided. Most utility comparisons are based on psychometric instruments that can be used to compare and rank order alternative outcomes. QALY is one example of a utility measure. It usually involves multiplying an incremental survival period by a subjective quality-of-life measure, indexed to a 0 to 1 scale, on which 0 is complete health and 1 is death. The attributes recognized in the comparisons include physical function limitations, social function limitations, emotional well-being, pain levels, and limitations on cognitive ability. Many intermediate states have been identified, from wearing glasses to acute pain to physical incapacitation. Any one individual may have a quirky utility curve, such as "I would rather be dead than a vegetable," but the scale is based on the aggregate values of a representative population and not the individual. That is why people are urged to think about their own utilities and express them in a living will. There are many other scales for specific diseases and disease states, because the QALY may not be sensitive enough over the range experienced by that specialized population or may not include a key variable. If one does try to develop a condition-specific measure, it could be useful to check out how well it maps on one of the generic psychometric quality-of-life measures and compare both against available objective measures of illness progression (Brazier et al., 2012). For example, in the case of rheumatoid arthritis, the most frequently used generic subjective utility measures seem to diverge from objective disease state measures as severity increases (Salaffi et al., 2011).

The estimated monetary value of a QALY varies considerably among analyses. A figure of \$50,000 per QALY is often cited in the United States. However, Braithwaite and colleagues (2008) noted that that amount had been used for a number of years and had not been adjusted for inflation. They took a willingness-to-pay approach based on U.S. investments in health insurance versus changes in the mortality rates between the non-elderly adult insured and uninsured between 1950 and 2003 and determined a range of \$109,000 and \$297,000 per QALY. They ultimately argued that the true value was closer to the World Health Organization (WHO) estimate of \$109,000. NICE (2013b) in the U.K. noted that a range of £20,000 to £30,000 pounds was still its cutoff for drug evaluations.

It is difficult to reconcile cost-utilities with the ranges of cost per life saved used by U.S. regulatory agencies. In 2004, the Office of Management and Budget suggested a possible range of \$1 million to \$10 million, but



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p. 145). We cannot agree whether a population is healthy or not, but we often use measures to indicate success or failure, such as visits to the emergency room or hospitalizations.

Pauly (1995) opposed two other approaches often cited in the literature: (1) the human capital approach, which emphasizes the economic cost to society, such as a worker's daily wage multiplied by the number of work days lost, or some other measure of lost productivity (assuming full employment), or (2) the friction cost approach, which measures the loss in productivity until the system resumes full productivity with a trained and experienced new worker or with the ill worker restored to full capacity.

Benefit-Cost Concepts

Where there are multiple choices, the rational person will select one or more alternatives that maximize his or her satisfaction, or what an economist would call the person's utility; however, our utilities are specific, if not unique, to each of us. Although individual utilities are cumbersome to capture, aggregating the utilities of a population presents far greater problems. Thus, decisions that involve more than one person usually require a common measure. Most analyses are based on aggregating all of the costs and benefits to individuals regardless of whether their utilities are typical and to whom or from whom they accrue. That is why so many studies end up choosing dollars; however, not all agree on that. Whatever the metric chosen, one ends up with a ratio of benefits to costs, and the higher that ratio the better an alternative. In health care, however, we must also consider to whom these benefits and costs accrue.

Circular No. A-94 defines *cost-effectiveness* as "a systematic quantitative method for comparing costs of alternative means of achieving the same stream of benefits or a given objective." In other words, the economist would say no to the request to "get me the most for the least money," because it is a mathematical impossibility. The two feasible formulations are:

- Get me the most benefit for a given sum of money (i.e., maximize my benefit-cost ratio).
- Get me a given benefit package at the lowest cost (i.e., minimize my effectiveness-cost ratio).

Analysts often retreat to their previously prepared position of trying to produce a set of benefits defined by the politicians at the least possible cost and then labeling the results cost-effectiveness, even though it is really cost-minimization. That leaves the hardest part, the valuation of benefits, up to the political process. At higher levels of government where the trade-offs

are between noncomparable benefits such as health care, highways, police protection, and recreational services, the only comparable means of comparison usually turns out to be money. The analyst has to be clear which is called for and be consistent in reporting the results. Pauly (1995) suggested that where money is used to measure benefits and (1) there is a fixed budget and (2) there is little variation in the preferences for outcomes, then cost-effectiveness analysis should be used, but where there is a variable budget and varying utilities of outcomes, cost-effectiveness is "much less suitable, in theory than cost-benefit analysis" (p. 111).

At this point, the analysis splits into two streams. One stream estimates the costs, whereas the other values the outcome. This chapter looks next at the cost side, which is the easier path to consider.

AGREEING ON THE RESOURCES REQUIRED

All too often the analysis team begins by talking about monetary costs. This is the wrong place to start in a cost analysis. When trying to compute the costs of a wedding reception, few people would start with a dollar figure per guest; instead, most would consider estimates of the number of guests, the menu for food and drink, the portions offered, the number of helpings per person, and the staffing needed. After these are defined, it is a simple matter to determine the costs by multiplying these resources by their market prices and totaling them up. That gives us an estimate of the total variable cost of the reception. Then there are the fixed costs of the reception, such as the chef and hiring the hall. However, the kitchen staff only has a certain capacity, and if the guest list exceeds a certain number, the staff would have to be augmented; therefore, many fixed costs apply only over a specific volume range. These are sometimes called step-variable costs or semi-fixed costs.

After we have the cost of our ideal menu and level of hospitality, it is time to figure out whether it falls within the acceptable budget range. Chances are it does not, and we would have to agree to spend more on the wedding than we had planned, cut some costs out of the reception, or cut down on some other aspect of the reception.

DETERMINING RELEVANT COSTS

Relevant costs are those affected by the decision being considered. There are two methods of estimating costs: aggregate costs and marginal costs. One arrives at aggregated costs by taking the total costs of a division,

Valuing Costs, Benefits, and Outcomes

Analysts crossing over from other sectors will find some very specific problems in applying their usual evaluation methods in health care. Effective cost and benefit analysis in health care often requires understanding the nomenclature and diagnostic coding systems used in this sector. Furthermore, market failure in this industry often makes it necessary to measure separately the consumer satisfaction and benefit/cost impacts of specific technological alternatives. Analysts can also expect to encounter a lack of cooperation because of fear of loss of autonomy, accounting systems biased toward revenue rather than cost finding, high levels of inherent variability, compartmentalization of information systems, and poorly aligned reward systems.

The role of benefit-cost analysis in health care was investigated thoroughly in the 1960s and 1970s (Baker, Sheldon, & McLaughlin, 1970; Barker, Barnes, & Mosteller, 1979; Office of Technology Assessment, 1980; Weinstein & Stason, 1977). During that period, the problems of benefit measurement seemed so insurmountable that most health care professionals doing analysis preferred to rely on CEA. Weinstein and Stason (1977) described the difference as follows:

The key distinction is that a benefit-cost analysis must value all outcomes in economic (e.g., dollar) terms, including lives or years of life and morbidity, whereas a cost-effectiveness analysis serves to place priorities on alternative expenditures without requiring that the dollar value of life and health be presented. (p. 717)

The basic problem is not one of using dollars, however, but one of expressing all of the relevant factors in any single metric. The alternative approach is to express the outcomes as a vector, but because one alternative vector seldom dominates the other, one must still deal with trade-offs among variables. The vector representation gets one into all the complexities of multidimensional scaling.

Further problems arise from the following:

- Determining the relevant costs, especially supply and demand estimation and resulting price levels.
- Incorporating values of nonmedical outcomes, including the way benefits and costs are distributed.

Pauly (1995) suggested that CBA and CEA are used because the better normative measure, willingness to pay, is hard to assess in the real world. He defined a personal benefit as an informed individual's willingness to pay

for a program, whereas a programmatic benefit is the sum of the willingness to pay of all informed persons affected by the program, including those making altruistic contributions but not directly affected by the service process. In a few situations, willingness to pay can be imputed from what individuals are paying for insurance against an event or to mitigate the risk of an event, such as installing seat belts or highway crash barriers. As Pauly (1995) noted, "Such concepts as addition to measured gross national product associated with a health program, the additional wages to beneficiaries and providers, or addition from investment now and in the future have validity only to the extent that they proxy willingness to pay" (p. 103).

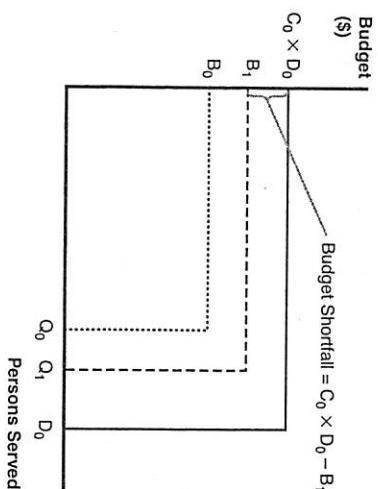
WHOSE WILLINGNESS TO PAY?

A study to determine the need for a third London airport, as well as its location, found that a preferred location would displace a 12th-century Norman church that was still in use. One group contended that the willingness-to-pay valuation of the church should be based on the value the current parishioners were insuring the building for against fire. A second group, however, argued that the Normans had incurred an opportunity cost for the last 8 centuries for the £100 that they invested to build it. They had foregone the opportunity to loan the money to the local usurers at a reasonable rate of interest; therefore, the church should be valued at the willingness to pay of the original parishioners, which would lead to a valuation of £100 plus compound interest for more than 800 years. Using this calculation, it would be worth more than the construction cost of the entire new airport.

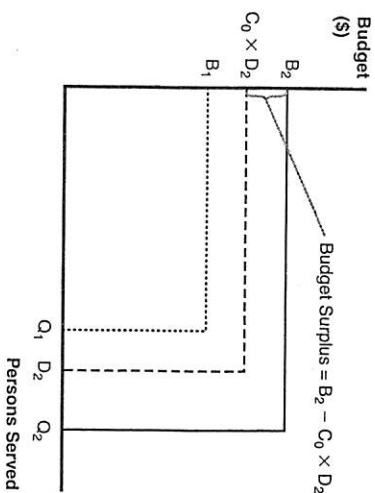
A proxy is something that stands in for the real thing. In one analysis, for example, the costs of the early loss of a mother because of breast cancer were estimated by the value of replacement family care services plus a proxy for the emotional losses. The proxy chosen was the estimated cost of the amount of psychotherapy used by those who lost a mother early in life (Bunker et al., 1979).

Indicators also are used to substitute for direct measures. "Good indicators are easily measurable and highly correlated with the underlying variable of interest, which is usually impossible to measure" (Wheeler, 2011,

Panel A – Demand Greater than Budgeted



Panel B – Demand Less Than New Budgeted Quantity



Panel C – Program Changes Increase Provider Cost, But What Is New Demand?

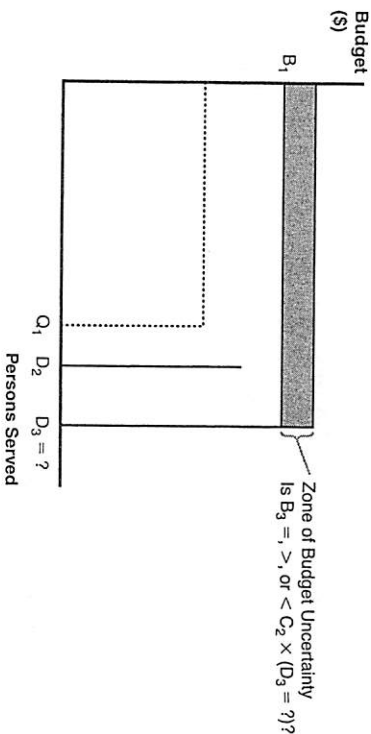


Figure 11-2 Supply and demand over time in a constrained budget setting.

Utilities and Preferences

Health policy analysts use the terms *utility* and *preference* somewhat interchangeably. The latter sounds admittedly subjective; however, public policy has no objective tool for measuring utility or for comparing utility across individuals. This creates an enormous challenge. Without the capacity to measure welfare, how do we maximize it? (Wheeler, 2011).

We also know that in health care people's utilities differ based on their health status. One has to be very careful to articulate whether the utilities asserted come from the general population or from the population affected by the relevant diagnosis. It is also important to know what stage of the disease progression they are in, if they have the disease.

A number of methods are used to try to get at preferences and utilities, including:

- Direct measures:
 - Standard gamble: What probability of success would be necessary to get you to choose a proposed outcome over the status quo or some other alternative(s)?
 - Time trade-off: How many months of life would you be willing to give up to achieve the more desirable outcome?
 - Rating scale (visual analogue scale): Pick a spot on a line from 0 (worst possible outcome) to 1 (best possible outcome) that represents each alternative being considered.
- Indirect measures:
 - Generic utility instruments: Use value weightings set by the general public with off-the-shelf questionnaires. For example, in the U.K., NICE uses the EQ-5D instrument; in the United States, the FDA seems to favor the SF-6D. The Health Utilities Index (HUI), the Quality of Well-Being (QWB) scale, and the 15 dimension (15D) instrument also are used.
 - Disease-specific instruments: The attributes and weights are tailored to the diagnosis and observed attributes.
 - Mapping the attributes from a validated disease-specific instrument onto a generic instrument.

Each approach has its strengths and weaknesses. For example, the standard gamble approach is sensitive to a person's risk tolerance. In addition, each presents its own problems in terms of comprehension and representation (Tolley, 2009).

total benefits to the public. In the medical literature, however, the term *cost-effectiveness analysis* (CEA) has acquired its own specialized meaning as an analysis in which the benefits are measured in nonmonetary units, such as lives saved or quality-adjusted life-years (QALYs). Such analyses, however, do not allow for comparisons of proposals that express outcomes in different units.

At higher policy levels, health care investments must be compared with other public investments, including those outside the health sector. When a common metric must be used to value both costs and benefits of the full set of proposals being analyzed, it almost always turns out to be dollars. This is known as cost-benefit analysis (CBA). Private-sector organizations use the same techniques but often with a different terminology, employing terms such as *return on investment* (ROI) and *internal rate of return* (IRR) when they evaluate and compare investment opportunities.

Hacker (1997) suggested that concerns about health care as an economic marketplace emerged forcefully in the 1970s following the introduction of Medicare and Medicaid and the resulting cost inflation. With the nation's access problems significantly addressed, government and industry turned toward issues of efficiency and effectiveness. This concern for efficiency and effectiveness in the federal government extended well beyond the health sector. The Bureau of Management and Budget issued Circular A-94, currently titled *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, in 1972 (OMB, 1972). It was and still is intended for use across most federal government agencies and programs.

Since then there has been an explosion of studies and methodologies coming out of the subfield of pharmacoeconomics. These have been developed to meet the expectations of managed care organizations and government regulators for expanded justification for authorizing use of yet another new drug or device. Safety alone is less and less their only concern.

BASIC TOOLS

The basic tools of economic analysis, including supply and demand analysis and benefit and cost analysis, are frequently bypassed by health care professionals because of measurement difficulties. These measurement problems pertain primarily to demand and benefit estimation, but also to costs.

Supply and Demand Concepts

Much of the health policy literature is concerned with aligning incentives properly through payment mechanisms, such as copayments, withholds,

discounts, and reimbursement rates. All of these really refer to changes in perceived prices and the effects these perceptions will have on the supply and demand for services. What really complicates health care is that some demand is generated by the consumer and some by the consumer's agents, the health professionals.

The policy analysis team will have to estimate the impact of those perceived price changes on the activity levels that they can expect to see in the service system. These estimates are not easy, even where a program is budget constrained. Take, for example, the situation in which a program is budget constrained and a budget increase is proposed. **Figure 11-2** illustrates a simple demand analysis relating to a budget constraint:

Given: Initial Budget = $B_0 = C_0 \times Q_0$

Where initial cost = C_0 , clients served = Q_0

Increased Budget = B_1 , where $Q_1 > Q_0$ and $B_1 > B_0$

In panel A, the new larger budget is fully consumed, but no cost change is assumed ($B_1 = C_0 \times Q_1$, where Demand = D_0 still is $> Q_1$).

In panel B, the budget is increased to B_2 , but this enhanced availability of services exceeds the demand (D_2) at the current perceived cost ($Q_1 > D_1 > Q_0$), and the budget is underexpended ($C_0 \times D_2 < B_2$).

In panel C, the program management proposes responding by making the services more accessible (available more conveniently at more sites). This reduces the perceived cost of the service to the clients and the demand increases ($D_3 > D_2$), but at an added cost, which increases the average cost ($C_2 > C_0$). Given this situation, the program management and the policy analysts must make new estimates (C_2 , D_3) and see whether the demand will be greater than, less than, or approximately equal to the new budgeted level of activity, which is B_3 divided by C_2 . This will again determine the programmatic resources required.

Yes, this is complicated, but it is the way life goes.

If the prices charged are modified by a proposal, then the analyst must investigate supply and demand relationships further, including the following:

- The rate of change in demand with a given change in price (price elasticity)
- The rate of change in supply with a given change in price

Where data are available, these relationships can be estimated through regression analysis.

the solution is sensitive to the choice of high- or low-end parameter values, it is necessary to make the decision makers aware of the applicable range. Perhaps they will authorize a study to narrow that range further. Sensitivity analysis is relevant to other variables besides efficacy, including costs, the population affected, and inflation rates.

The relevant change in effectiveness associated with an intervention is the *marginal change*. For example, in 2005, the Washington State Legislature directed the Washington State Institute for Public Policy to report on the benefits and costs of “evidence-based” approaches to the treatment of alcoholism, drug addiction, and mental illness. The institute performed a meta-analysis based on a review of 206 studies in the literature that met a specific set of criteria for quality of experimental design and measurement, such as use of a control group. This was an unusually complex analysis, because the legislature specifically mandated the study of the effects of treating individuals with substance abuse disorders and/or mental illness disorders in terms of their fiscal impact and “the long-run effects on statewide education, crime, child abuse and neglect, substance abuse, and economic outcomes.” There were already systems in place for dealing with these disorders, thus the researchers calculated the benefits based on marginal changes in costs and outcomes from expanding the existing services to provide evidence-based and consensus-based services to those not yet served. Few mental illnesses are currently cured, and many who stop abusing drugs and alcohol relapse over time. The study team had to estimate the reduced incidence or severity from implementing best practices. It estimated the number of people in the state with each disorder and subtracted out the number already receiving services. Then they assumed that about 50% of the untreated populations would accept services if they were made available. The analysts did not try to estimate the impact of having existing services move from their current modes of operation to the evidence-based approaches. Because the available studies were all short-term studies, the institute’s staff estimated a “decay rate” for each disorder to represent the loss of participants and program impact over time, and it also included a factor in the modeling for those individuals who would recover on their own without treatment.

The institute’s meta-analysis of the suitable studies concluded that the expansion of services would achieve a 15–22% reduction in incidence or severity of these disorders, resulting in a savings of \$3.77 for each additional \$1 invested. Taxpayers would see direct savings of \$2.05 per additional \$1 invested, or \$416 million per year in net payer benefits, if fully implemented (Aos, Mayfield, & Yen, 2006).

AGREEING IN DETAIL ON THE DELIVERY SYSTEM INVOLVED

Analysis team members may have differing assumptions about how the intervention is to be delivered in the field. Reaching a common description of that process is an important early task. Discussing the process and drawing up a detailed process map are ways to get at that reality. Doing so leads directly to a description of the resources required. Team members may choose to revise their estimated effectiveness after the process is better defined and they better understand the problems of implementing the process in the field.

SELECTING THE ANALYTICAL APPROACH

A number of types of economic analysis can be performed. One key question will be, “What impact will a proposal have on the supply and demand for services?” Payment, access, and quality issues affect the perceived price and demand for services as well as their costs. Given an analysis of changing demand and supply, the team must decide how to analyze the most promising approaches. Rychlik (2002) suggested a hierarchy of analytical approaches for comparison and decision making:

- Establish the cost (burden) of the illness, usually including quality-of-life impacts of the problem.
- If the assessment shows little difference in impact from the relevant interventions or between the intervention and the status quo ante, conduct a cost-minimization study.
- If the comparison is among similar types of outcomes but there are significant differences in benefits and costs, conduct a cost-effectiveness study.
- If there are significant differences among the programs being considered, such that a common metric is necessary for benefits and costs, do a cost-benefit study.
- If quality of life after survival is an important parameter, then consider a cost-utility study, in which differing quality measures are compared using market research techniques such as conjoint analysis.

Sometimes public agencies focus on whether a proposed outlay is cost neutral or whether it is cost effective. To be cost neutral, the proposal must not increase the overall costs to the agency. To be cost-effective, the proposal must be the least costly method for reaching a predetermined level of

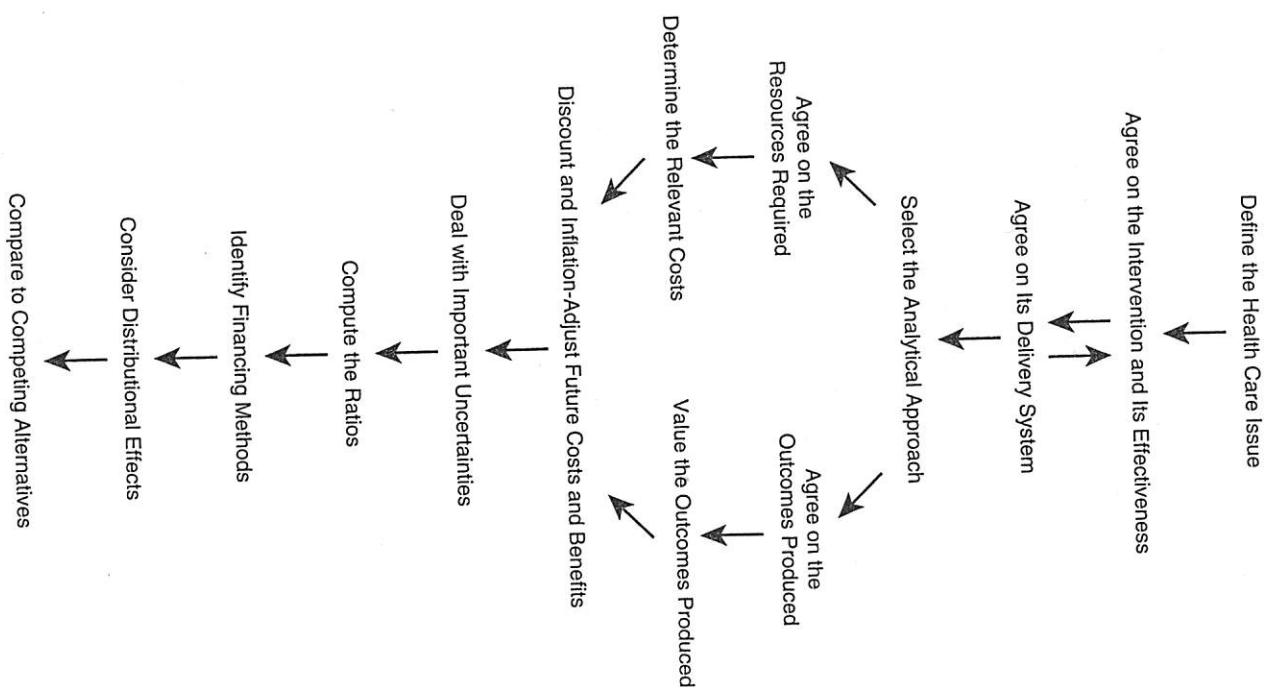


Figure 11-1 Steps in the cost-benefit analysis (CBA)/cost-effective analysis (CEA) process.

The team can then proceed to subsequent steps. The first is to define the health issue that is to be addressed, including population, diagnosis, incidence, and impact, and then study the relevant intervention technologies. Then the group must agree on the effectiveness of the current and proposed interventions and, if necessary, conduct research to establish an acceptable range of effectiveness values for the analysis.

DEFINING THE HEALTH CARE PROCESS INVOLVED

The team should conduct a detailed process analysis to ensure agreement on how the intervention is delivered, especially if there is little field experience with it. It is often well worth the effort to step back and visualize how a new or modified process will work and how its detailed implementation will go forward. Otherwise, the team may be making a stab in the dark about the resources required.

The feedback arrow in Figure 11-1 indicates that sometimes the process analysis produces a revised estimate of the expected effectiveness as the team learns details about possible barriers to adoption and implementation. Many more feedback loops could be added because at any point in time the team can uncover a need to revise its earlier estimates.

AGREEING ON ITS EFFECTIVENESS

Clear evidence on the effectiveness of a proposed policy is a rarity. Much evidence is contestable even as to its science. Clinical trials may be limited, or in a few cases may not even be feasible. The populations involved in clinical trials and demonstrations may have been small or somewhat different from the one that will be affected by the policy. Often professional groups, having differing interests, cite studies that support their viewpoint and ignore those that do not. For example, in an analysis of folic acid supplementation, those who favored it cited its effects on neural tube defects (NTDs), whereas those opposed cited its ability to mask other metabolic deficiencies.

Where the evidence is unclear or disputed, one way to proceed is through sensitivity analysis. For example, after an analysis is done using the efficacy estimate that the analysis team thinks most valid, the calculations are repeated with alternative efficacy values to determine the range of values over which the conclusion holds. Many times the conclusion is not affected despite the heat generated by the differing estimates, but where

Case 10 (continued)

down in jurisdictional disputes. Congress was becoming increasingly polarized and partisan, making it difficult to move any kind of major initiative. Breaking this gridlock would have required a coordinated, unified approach from the party leadership, but many Democrats were still drawn to the simplicity of a single payer. Many Republicans, meanwhile, were drawn to a strategy advanced most strongly by the Project for a Republican Future—refuse any temptation to compromise and defeat any Clinton proposal outright, at any cost. Democrats did not seem to have a clear strategy for moving the bill through the various committees without Republican cooperation.

As the Health Security proposal took a tedious, contentious, and messy path through committee hearings and markups, external stakeholder support, which had seemed so solid at the start, began to crumble. The plan's greatest nemeses proved to be the Health Insurance Association of America (HIAA) and the National Federation of Independent Business (NFIB), which vehemently opposed any employer mandate. In addition to lobbying policy makers, NFIB engaged in what Michael Weisskopf, a *Washington Post* reporter, labeled "cross lobbying"—targeting other stakeholder groups to change their positions. One of the first targets of cross lobbying was the AMA. The AMA had expressed several reservations about the Clinton plan, but had reversed its decades-long opposition to any employer mandate and was on record as supporting health system reform. At the urging of NFIB, the AMA House of Delegates voted December 7, 1993, to rescind its support for an employer mandate.

Big business also broke ranks. Medical inflation seemed to be slowing in late 1993, and President Clinton had failed to deliver on his promise to reduce domestic spending. In February 1994, the Business Roundtable endorsed a competing plan, and the National Association of Manufacturers and the U.S. Chamber of Commerce followed quickly by repudiating the Clinton proposal.

That same month, the Congressional Budget Office announced that it could not support many of the budget assumptions the Clinton working groups had used to argue that the plan would help reduce the deficit. It would not even agree the plan was budget neutral. Instead, it argued the plan would add \$74 billion to the deficit.

The White House, meanwhile, was losing ground in the court of public opinion. Polling immediately after the proposal went public was strongly favorable. A Harris Poll conducted in March 1993 found strong support for short-term price controls (76%), caps on premium increases (78%), an employer mandate (82%), and regional purchasing cooperatives (86%), but early polling also disclosed that people did not understand these concepts. Early response to the Clinton proposal released later that year was also favorable according to the polls, but some of the same surveys demonstrated that the public did not really understand what was being proposed in the highly complex 1,342-page draft legislation. The public also had some major concerns.

An ABC News/*Washington Post* poll conducted in early October 1993 found that 51% supported the Clinton plan and 59% thought that it was better than the current system; however, 57% opposed new taxes to pay for it. More people thought health care would get worse under the plan (34%) than thought health care would improve (19%). Many were worried about having less choice in providers (72%), increasing costs (70%), a loss of access to expensive services (69%), and a host of other issues.

These concerns gave the plan's opponents very effective points of leverage. In particular, HIAA focused in on them with its Harry and Louise campaign, which featured a worried couple discussing concerns about the plan. These campaigns made good use of polling information. The first advertisement focused on worries that health insurance plans would be less comprehensive and there would be fewer types of plans from which to choose. The couple concluded its conversation with the exchange, "They choose. We lose."

Congress struggled with the proposal through the first half of 1994, trying different solutions and searching for some kind of compromise that had a chance of success on the floor; however, none of the proposals appeared to have enough support to survive a filibuster. At one point, Republican Senator Phil Gramm announced that Congress needed to "stop carrying around this corpse, changing its clothes, and putting more powder on its face."

When Congress returned from summer recess, it was prepared to consider less-ambitious reforms. By this time, 57% of the public favored more incremental steps according to a *New York Times* poll published September 13, although 50% said the president should veto anything that did not cover everyone. Even modest reform bills were considered

Case 10 (continued)

too risky by this point because they could serve as stealth vehicles for comprehensive reforms, expanding at the last minute into some kind of universal coverage legislation. In late September, congressional leaders delivered a demand to President Clinton—if the president expected action on the General Tariffs and Trade Treaty, there could be no more discussion of health care legislation. On September 26, a year after Clinton said he would fix a broken system, Senate Majority Leader George Mitchell took health care reform off life support. The “corpse” was now officially dead.

Discussion Questions

1. Theda Skocpol (1996) described two approaches that critics argue Bill Clinton should have used to develop his proposal: (1) ask a small group to develop broad outlines for reform and then ask Congress to work out the details and (2) establish a prestigious blue-ribbon commission that might have achieved buy-in from business groups, congressional leaders and other policy makers, and stakeholders. What might be some of the pros and cons of the three different approaches? (The third was the Clinton approach.)
2. What would a map of Bill Clinton’s authorizing environment for health care reform look like?
3. Discuss how the three streams of policy making identified by John Kingdon—policies, politics, and problems—opened a window of opportunity for health care reform in 1993 and what had changed in those streams by the time that window had closed in 1994.
4. What would a force field analysis of the Health Security plan look like?
5. Where would the Health Security proposal fall on Oliver’s framework for analysis of policy design and political feasibility? What were some of the concentrated costs and benefits and to whom did they accrue? Now answer the same question of diffuse costs and benefits.
6. Who would you have surveyed if you were using the Delphi technique to analyze the political feasibility of the Clinton proposal at the time?

Chapter 11

The Policy Analysis Process: Evaluation of Economic Viability

Policy analysis involves the allocation of scarce resources. This chapter focuses on economic and financial aspects of the allocation process. Both affect the economic viability of a proposed policy alternative, which likely turns on the following questions:

- How much will it cost?
- What value will we be getting for the money?
- How does that value compare with other alternatives under consideration?
- If it is something we want to do, how will we pay for it?

To address these questions, the analysis team needs to undertake the tasks outlined in **Figure 11-1**. The team also needs to consider the points of view or interests of whoever commissioned the study. However, a fine line exists between pleasing the “customer” and maintaining a group’s professional integrity. One way to address this is by “changing hats.” The analysts can say, “When we put on Hat A, we get X, but when we put on Hat B, we get Y.” All of us wear many hats in health care, including patient, payer, parent, spouse, professional, and citizen.